Reviewed: Picasso IV • Make CD • Turbo Print 5 • Net Connect

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CU AMIGA MAGAZINE

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Editorial



A new owner has appeared from nowhere, but will this give the Amiga a launch pad for the future, or just another round in the game of corporate pass-the-parcel? Check the news feature and make up your own mind. In the mean time, get your A1200 souped up with Zorro slots (page 30) and why not get yourself a cheap-ish CD-ROM writer while you're at it (page 24)?

We've also got a soak test of PCx and also PC-Task, with the desirable Picasso IV sharing top billing in the reviews section. On the games front we've unearthed a healthy selection of forthcoming attractions and there's still all your usual favourites to get stuck into as well.

Tony

Tony Horgan, Editor

Features



Special News Report



Cover Disks & Super CD-ROM



News

Games

Tech Scene – utilities and hardware

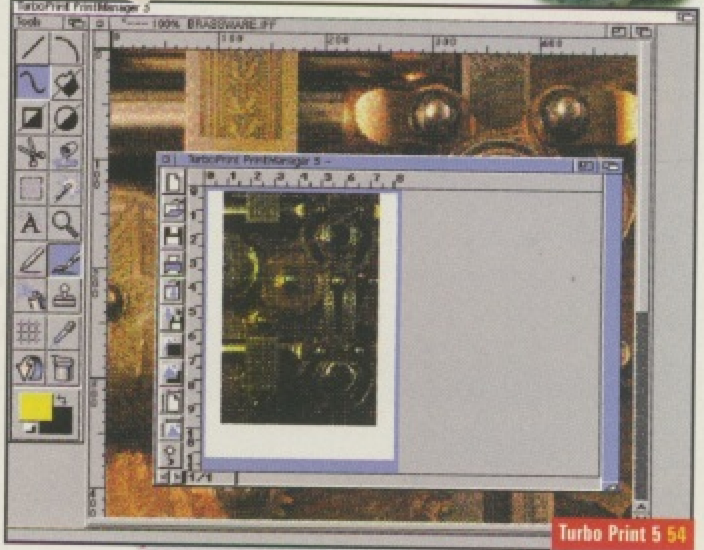
Workshop

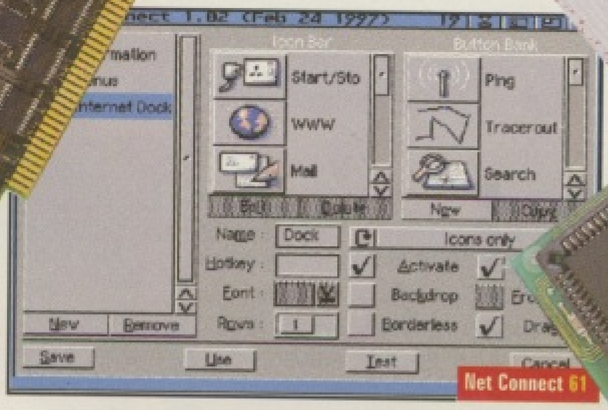


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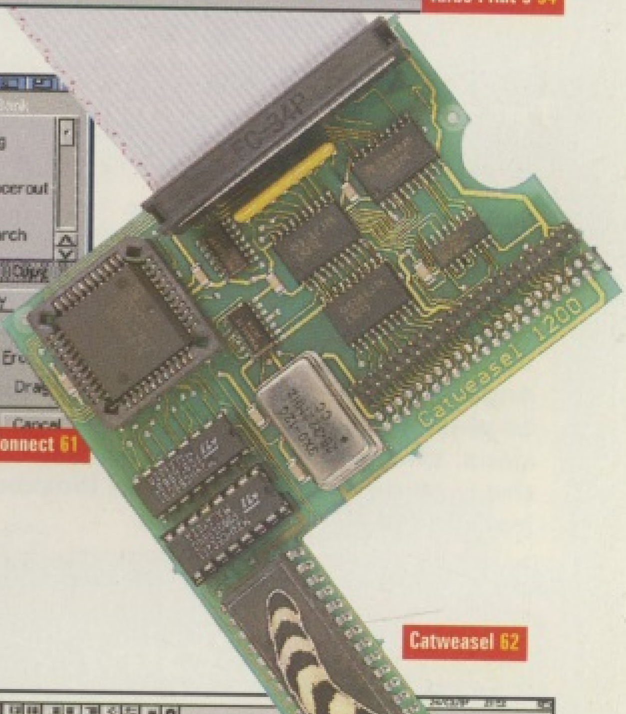

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The Sun

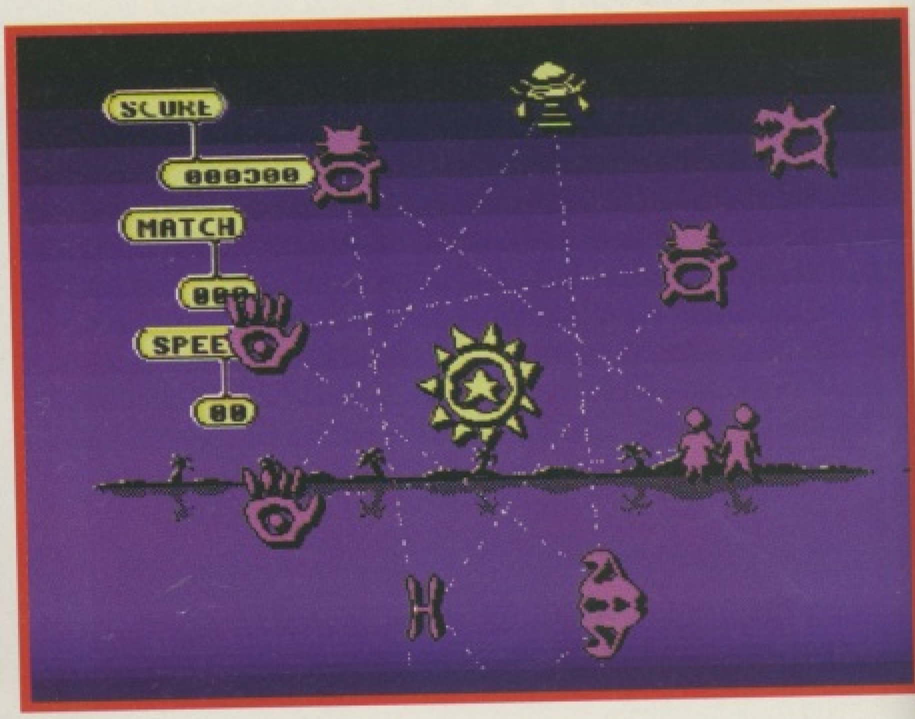
(or You Cannot Be Sirius)



Maybe it was something we ate, but we think this game is one of the freshest, most original pieces of PD for ages. Join the Sun-Chariot of Amun-Re as it journeys across the Duat, the ancient sky-realm of ancient Egypt, in a game which is as relaxing as Tetris and as manic as Llamatron.

Getting started

Stick the disk in your drive and boot up. After a few moments quotations from Ecclesiastus and the Pyramid texts appear on the screen. Read them carefully, they are very important. Now press fire, watch the bizarre title page just long enough to see it go mental, and press fire to play. The icons at the top can be used to get instructions, choose music or FX, or play the game. Check out the readme on this disk from Workbench to see how to install it to hard drive.





We were scratching our heads trying to decide what to put on the games disk this month. There were a few very nice looking things knocking about, but they were all large and we needed something small enough to allow Pro Page to fit. We were sitting in front of this manic little puzzle game that got sent into the PD department and running through all the options. Blasting away at multicoloured glyphs, we had to reject them all one by one. Disaster! We would have no game disk this month! No games were small enough that were any good this month, what could we... wait a minute!

This game is great. Not take over your life sort of great, just give it a blast every now and again and you'll never get bored of it great. Author Matt West of aiXS software disagrees, he thinks it's not too hot. But then he wrote this thing, so he must be crazy.

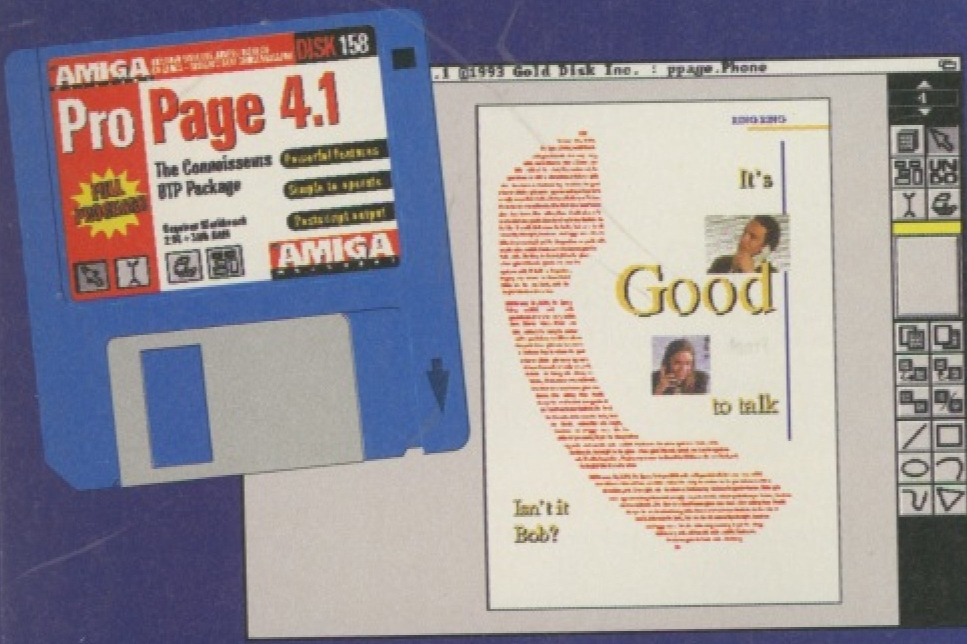
You are the Sun, and about you orbit eight planets, each represented by a different glyph. By moving the joystick left and right, the planets are made to orbit around you. Every time you shoot a glyph, it changes, passing through the cycle Hand, Kids, Cat, Dog, Star, Rabbit, UFO, Emu. In the top right corner of the screen you will see a target glyph. To win the round, you must turn all of the planets into the same target glyph simultaneously.

If this sounds easy, it is because I have not yet told you that while all this is happening, the planets are drawing towards you, and dragging you down towards the Horizon. If the sun sets, the game is over. Shooting the glyphs pushes them away from you temporarily. The closer the planets get to the sun, the quicker it sets, so you will often find yourself forced to shoot glyphs you have turned into the target glyph before you are ready. If you shoot one which is the same shape as the target glyph, it and any others of that shape will change to a random glyph and the Sun will rise back up a little, depending on how many glyphs currently match the target.

There is more - the bar vault game, wild glyphs - but you'll just have to read the instructions. It's not as complex as it sounds. Think of the old vector-based coin-op Tempest and you'll get the gist. ■

DISK 158

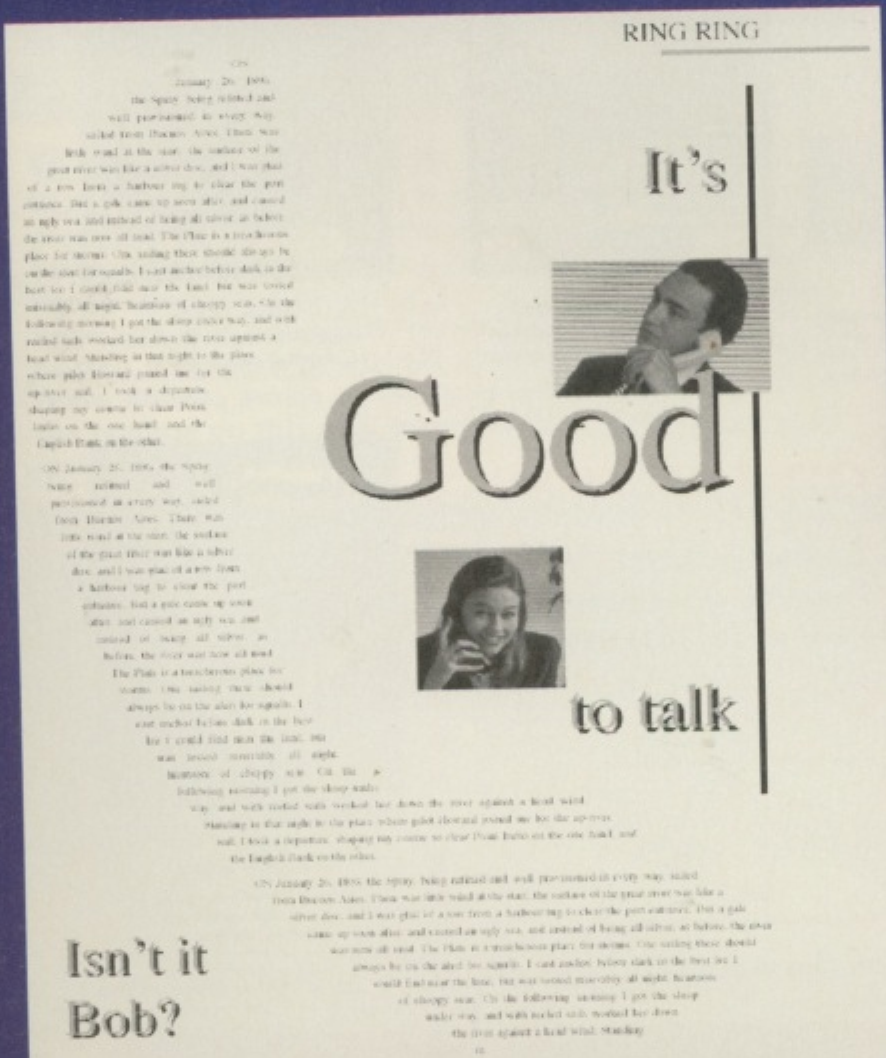
Pro Page 4.1



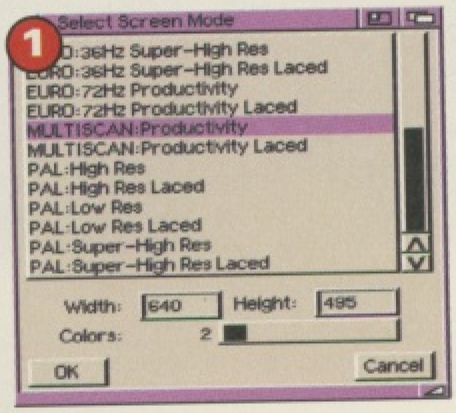
The Amiga's flagship DTP application comes your way this month exclusively with CU Amiga. Introducing... ProPage 4.1.

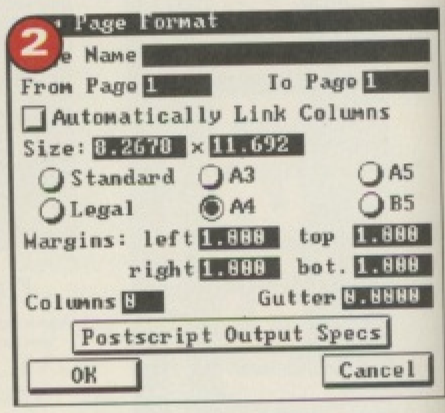
Over the years, Professional Page has been the choice of many leading desktop publishers. Amiga magazines likes Just Amiga Monthly, Amiga Review and AmigaEm are all produced with Professional Page. In France, one of the leading glossy Amiga magazines, Amiga News is also produced using this great application. It's that good and now you can join in the fun and use this great program for your own publishing needs.

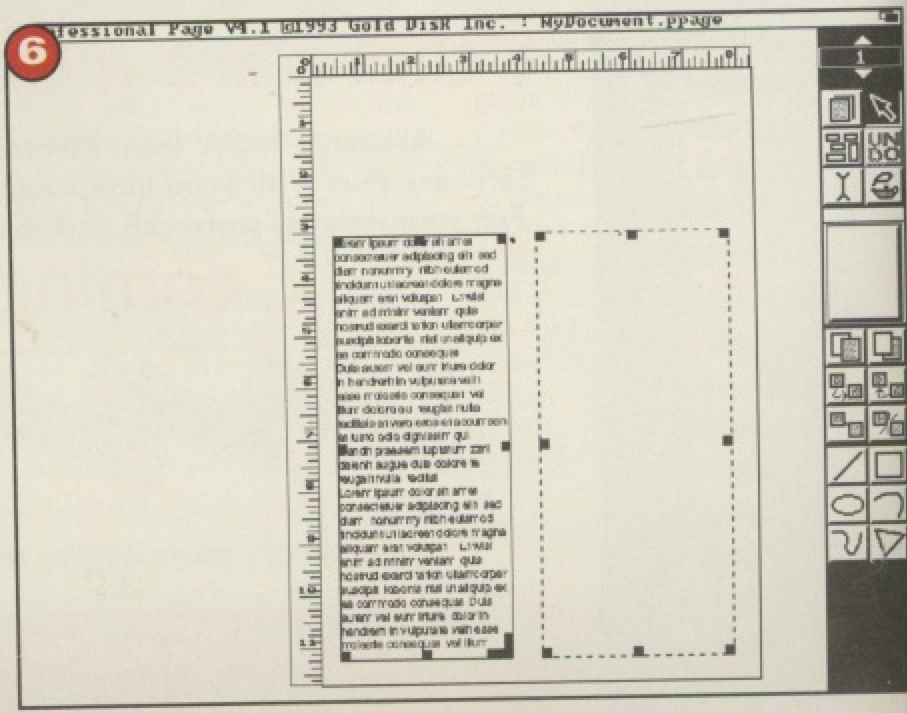
Professional Page 4.1, affectionately known as ProPage, is a page layout program published by Gold Disk (now defunct), and allows you to create everything



▲ The quality and clarity of output from ProPage is limited only by your output device!







from a letterhead to a book. The program uses a custom interface, one that is very un-Amiga like but is also very quick, especially when run in black and white.

The concept

The concept behind using ProPage is based on boxes for all your elements. Take text for example. Frames containing text can be linked so the text flows from column to column and page to page. These columns can be different sizes. ARexx is also a powerful feature with "Genies" letting you automate many functions. Just one example is a genie that creates a drop shadow. There are many more genies that come with the program as well as a disk containing even more genies from the 'genie-us' Don Cox, available from LH Publishing.

Printing using PostScript or non-PostScript printers is another highlight with this great piece of software. ProPage will work with both TurboPrint and Studio II as well other normal Amiga printer drivers. One interesting function is a set of off-set gadgets in the Non-PostScript printer requester which lets you position the page in the right place on your paper. Those wanting to use PostScript will find support for black and white printing as well as spot and process colour separations. To help make creating the text for your document easier, ProPage comes with its own text based word processor called AE (Article Editor) and for the colour conscience, a Pantone colour library with thousands of ready made colours. As you can see, this is a very powerful program. In short, Professional Page will help you create pages that look the business.

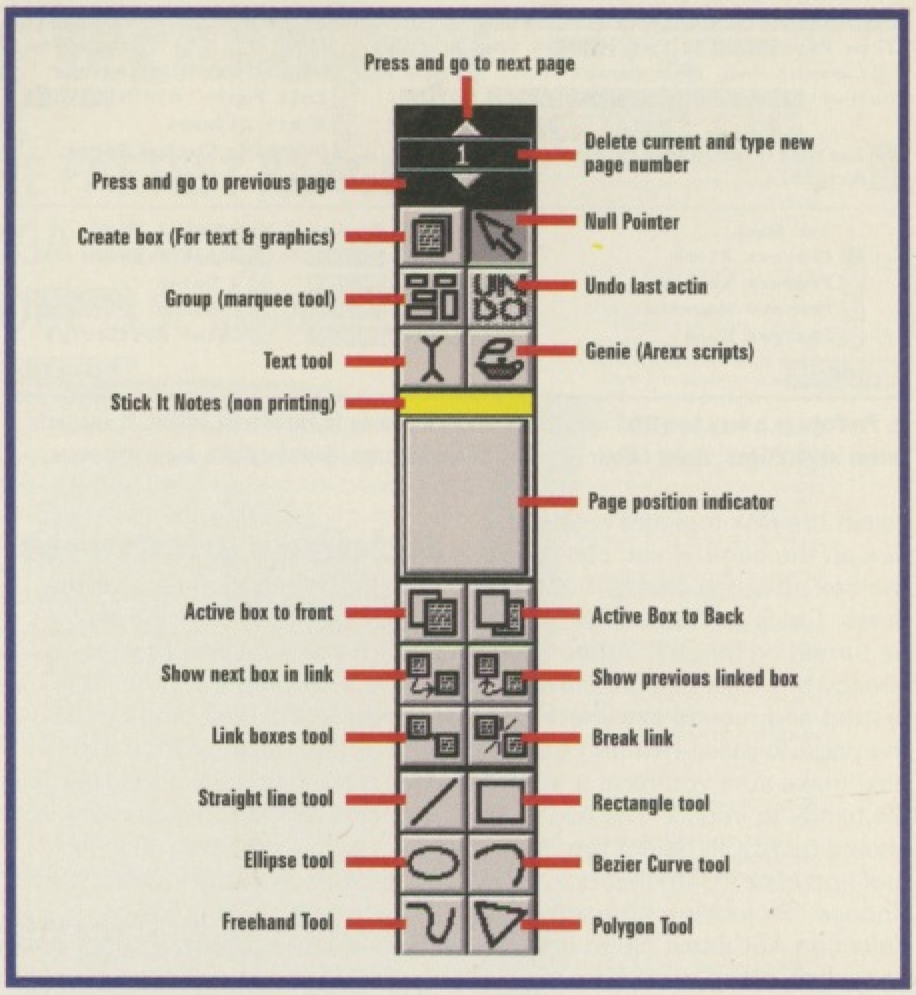
Getting started

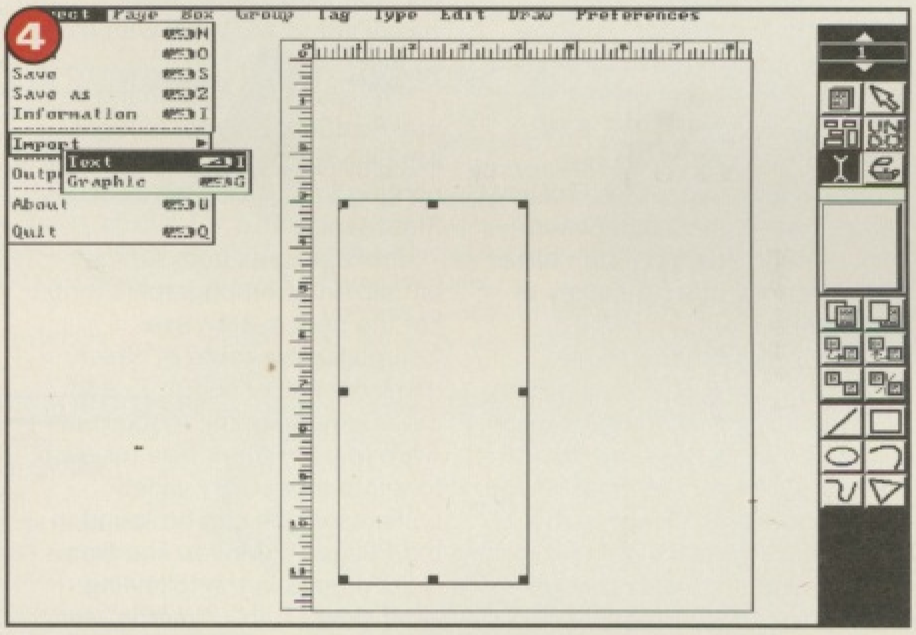
When you run ProPage for the first time, it will ask you to select a screen-mode for the program. After that's done, the program will load but before you can start doing the business, you will need to create a page or two.To do this, choose the "Create/From Default" item from the Page menu (second menu from left). Turn off the Automatically Link Columns button and click OK. You now have a blank single page document. It's best to save it from the project menu at this point. When giving documents a name, it's advisable to use the extension ".ppage" so you know it's a ProPage document. Now that you have saved your page, you can continue creating your document, pausing every now and then to press the Right Amiga-S keys so that your document is again saved to disk.

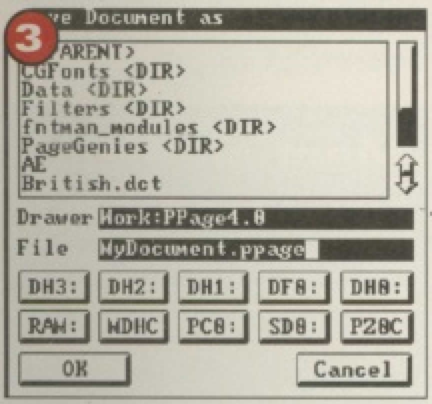
Item boxes

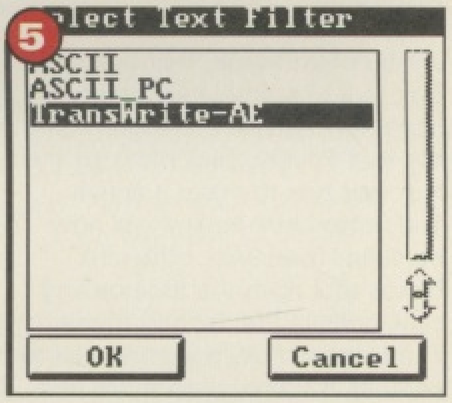
All objects in ProPage must be placed into a box. This has a number of advantages. Unlike QuarkXPress, where you have different boxes for text and graphics, in ProPage the same type of box is used for both text and graphics, with ProPage automatically recognising what type of element you have placed in the box. This is important to mention because if you have text in a frame, when you double click on it will let you alter the tab positions while if it's a graphic in the box, ProPage lets you change the scale of the image inside the box.

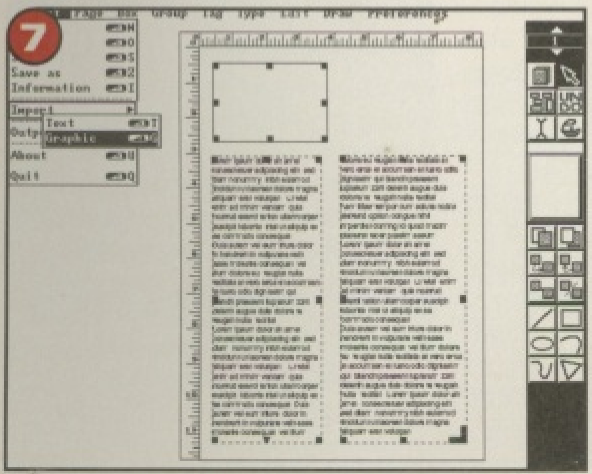
Let's tackle putting text in a box first. Before you can place text on your page, you need to create a box for it. To do this you

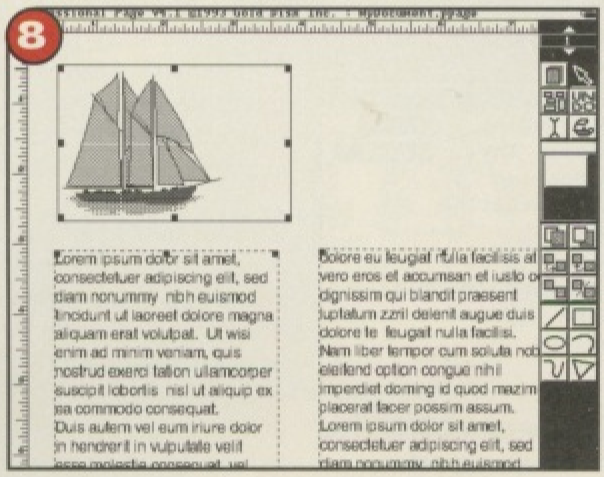






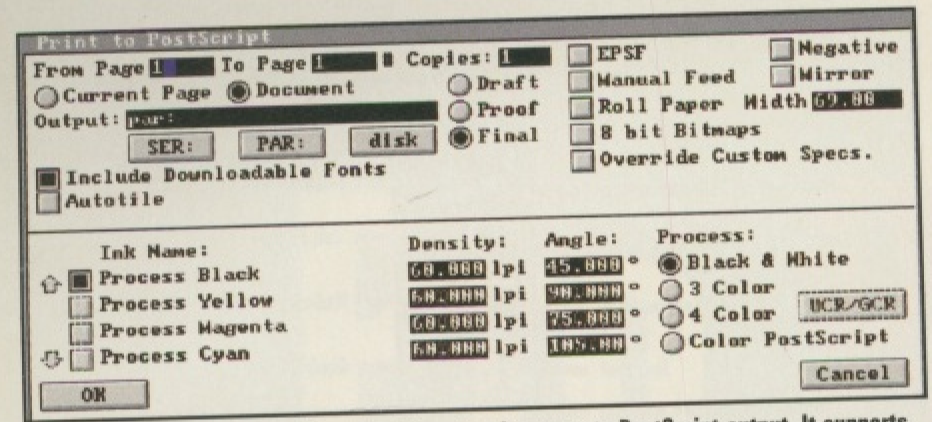




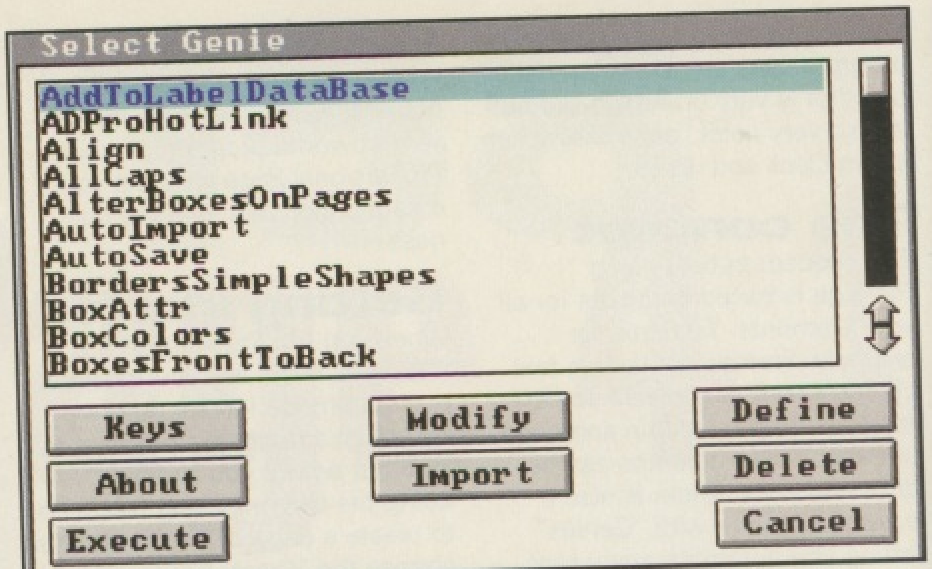




Continued overleaf ►►►



▲ ProPage is a very powerful application when it comes to PostScript output. It supports colour separations, under colour removal, 24-bit bitmaps, downloadable fonts and more.



▲ Arexx scripts in ProPage are called Genies and can be run by choosing the script required and then clicking on the Execute button.

select the Box tool and create a box on the page. If you can't see the box after you create it, then press, Ctrl-B and Box Outlines will be turned on (or OFF if they were already on). This box can now be resized and moved anywhere on the page.To place text into this box, make sure you have a text file handy to import. The text should be ASCII. Select the Text tool and click inside that box. Choose "Project/Import/text". Select an ASCII text file to import and when asked what filter to use, choose, ASCII. To paste the text into the box, press F1.

Linking boxes

Before we go on, use the Null Pointer to grab the box handles and resize the box. You can see that the text reflows to adjust to a different size frame. With luck, the text file you have used will be a rather large one and will still have some text left over. You can tell this by an upside down L in the bottom right-hand corner of the text frame.

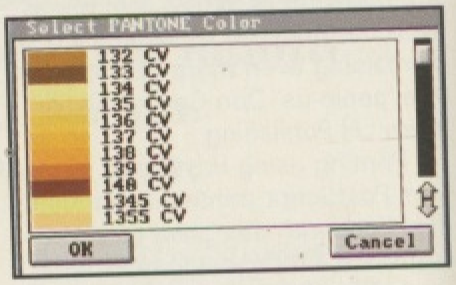
To get this text to flow into another text frame, first use the Box tool to create a second text box anywhere on the page. Using the Null Pointer, click once on the first text box to make it active. The dotted box outline will now be solid. Then select the Link Boxes tool from the toolbox and click once in the second frame. The text will flow from one box to another. If there is still more text left, you either reduce the text in size or make another page.

Adding pictures

A page with no pictures is like a cloudy day, grey and very dull. Bring some sunshine to your pages by adding a picture. This requires you to first create a box to hold the graphic. Once you have done that, select the Null Pointer, make sure your empty box is active and then choose Project/Import/Graphic. Start off by choosing an IFF-ILBM or ProDraw clip and when done, click OK. In most cases, the graphic will not fill the box. To correct this, you can either alter the graphic so it fills the box or just resize the box so it is nice and tight around the graphic.

Pictures can be scaled by pressing the Alt key and using the Null pointer to stretch the box containing the graphic. ProPage supports many graphic formats such as IFF-ILBM, Illustrator 88, Art Expression EPS, TIFF, BMP, PCX and EPS and of course, ProDraw clip. If you have ProDraw you can send images between ProDraw and ProPage (both have to be running) using a hotkey of Right Amiga-/.

If you want to view these images in colour and you have an AGA machine, then switch screen-mode (Preferences menu) to 256 colours. ProPage, like most Amiga programs, works slower in this mode but is certainly a lot prettier. A point worth noting is that on an AGA Amiga running Workbench 3.1, you will get ghosting of requesters in 16 colours. This is due to some tweaking of the 3.1 ROMS. On an AGA Amiga running KS 3.0, ProPage works fine in 2, 16 and 256 colours. If you have AGA and 3.1, then you will only be able to run in 2 or 256 colours. On ECS Amigas (non-AGA), using 3.1 ROMs and no graphics card, you will only be able to run in 2 colours.



Printed output

After you have finished your page, you'll want to print it and this is pretty straight forward in ProPage. The printer driver used is the one you have set in Printer Prefs. If you are using Studio II or TurboPrint, it will work with these as well.

The short cut for printing to a non-PostScript printer is Right Amiga-M while the short cut for printing to a PostScript device is Right Amiga-P.

ProPage uses both Amiga bitmap and Compugraphic fonts. For the best quality, use Compugraphic fonts of which there are plenty about. To add new Compugraphic fonts, you need to copy three files for each font into a directory called CGFonts which can be found in the PPage4.0 drawer. The files required end in the following extensions: ".lib", ".metric" and ".dat". An example of this would be "Times.lib", "Times.metric" and "Times.dat". After you have added the fonts, you need to run a program called CG_Update which is in the PPage4.0 directory.

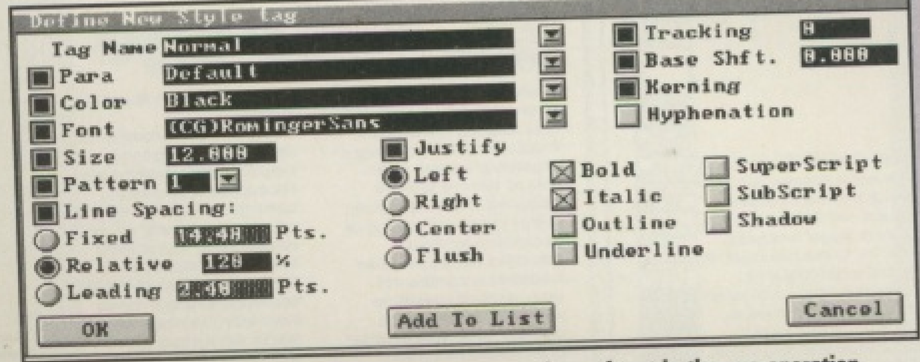
Missing fonts?

A common problem for ProPage beginners is the program can't find its fonts. In order for ProPage to know where its CGFonts are, it needs two things to be present. One is an assign in the, which tells ProPage where it can find the drawer called CGFonts. The other key attribute is found in a file called "PPage.ini" which resides in the S directory. In that file is a line beginning with FE and then a space and then the path to where the CGfonts can be found. If this path is not right, you can correct it with a text editor such as Pro-Page's Article Editor (AE).

That's all we've got room for this month. Larry Hickmott's regular DTP series will be covering some further aspects of the program over the coming months. If you need more information immediately, check the panel below for details on how and where to order the full manual.

Manual offer

To get the best from the many and varied powerful features of ProPage 4.0, such as genies and text tricks, you could do with getting the full instruction manual, the additional tutorial book or both together. Separately they cost £14.99 each plus P+P, or you can get both, plus a set of extras disks for £24.99. A CD version of this bundle with even more software is available for £29.99. Orders are to be made out to: LH Publishing, 13 Gairloch Ave, Bletchley, MK2 3DH, United Kingdom. Please add postage of £3 in the UK, £6 for Europe and £8 for the rest of the world. For further details, telephone LH Publishing during office hours on (+44) 01908 370 230.



▲ Style tags enable you apply many attributes to a piece of text in the one operation. ProPage also supports paragraph style tags.

Harwoods... extending the boundaries of Amiga technology



CYBER BLIZZARD SPEED

THE FASTEST RANGE OF AMIGA BOARDS AVAILABLE, NO ONE ELSE COMES CLOSE!

CYBERVISION 64/3D

64-BIT ENGINE A2000/3000/4000 (T Series) 3D VERSION
24-BIT COLOUR ACCELERATED GRAPHICS CARD.

For all Zorro-3 & Tower System A1200s with Zorro II backplanes. The core of this great board is the VIRGE GRAPHICS CHIP from S3. With 3D capabilities, it's able to process complex 3D functions in hardware (eg. shaded/textured surfaces) with Trilinear Filtering and Shading/Fogging for super realistic Real Tome 3D Rendering. When used with CyberGraphX 3D library, Cybervision 64/3D can even offer a broad range of 3D facilities for any software developer.

CyberVISION 64/3D... 4Mb Version — LOWER PRICE! £199.95

MPEG Decoder - added to the Feature Connector to provide real time MPEG audio and video decoding at full size custom screens or, in Workbench windows (HQ display using 16/24Bit modes from CyberGraphX Workbench). Stereo audio output is provided via the supplied dedicated line output jack. Upgrade to a Cybervision 64/3D and MPEG bundle (from previous Cybervision 64) for a special low price! £174.95

Monitor Switcher - with integrated scan line doubler. Designed to fit into the Amiga slot, this gives full automatic switchover from the standard Amiga signal to Cybervision 64/3D's output. Both cards may be fitted inside A3000/4000 models leaving three Zorro-III slots free. £84.95

CYBERSTORM II

CAN BE EXPANDED TO A FULL 68060

AMIGA 68040ERC AND 68060 ACCELERATORS

You can choose between the 68040/40ERC Cyberstorm II or the ultra powerful 68060 version. When you fit a Cyberstorm II 68060 Accelerator to YOUR A3000, A3000T, A4000 or A4000T you can for example, render a graphic with Imagine 2.0 software in just 24 minutes! Compare that with a massive 10.34 minutes on a standard A4000 '040/25! With no jumpers, both Cyberstorm II models are fully plug and play and, A4000 users even have the option of a SCSI-2 Module if they wish (A3000 users already have SCSI built into their Amiga hardware).

- Up to 128Mb of standard SIMMs can be installed and you can even transfer the 72Pin SIMMs from your Amiga A4000 straight onto your new Cyberstorm.
- Optional SCSI-2 Module
- If your budget currently only covers the cost of Cyberstorm II 68040ERC, you can always upgrade later to the full 68060 processor for the extra power!

Cyberstorm II 68040/40... 40MHz 68040ERC - 0Mb, Expandable to 128Mb — LOWER PRICES! £319.95
Cyberstorm II 68060/50... 50MHz 68060 - 0Mb, Expandable to 128Mb — £479.95
Cyberstorm II SCSI-2 Module £89.95
Cyberstorm II SIMM RAM Expansions (Please call for a range of SIMM prices) £Call

1240T/ERC TURBO ACCELERATOR MEMORY BOARD

CAN BE EXPANDED TO A FULL 68060

A2000T* TURBO ACCELERATOR and MMU/FPU for *TOWER SYSTEMS
40MHz 68040 - 0Mb Standard, expandable to 128/256Mb
30MIPS with 60 Nanosecond SIMM fitted.

A super LOW COST A1200 Turbo Accelerator Board, ideal for housing on any *Tower System A1200 main board (mechanical dimensions, high power consumption and heat emission require an active cooling cap, we therefore do NOT recommend fitting to standard A1200s without the appropriate modifications etc.). The "ERC" Processors used on these boards are recycled and vigorously tested 68040 CPUs operating at 40MHz with MMU/FPU - an excellent guaranteed and competitively priced alternative. Available options such as the SCSI-IV Kit and RAM are shared with the Blizzard 1230-IV and 1260.

Blizzard 1240T/ERC Turbo...
40MHz 68040 and MMU/FPU, 0Mb 32Bit Fast RAM, expandable to 128/256Mb £249.95

2040ERC TURBO ACCELERATOR MEMORY BOARD

A1500/2000 TURBO ACCELERATOR and MMU/FPU
40MHz 68040 - 0Mb Standard, expandable to 128Mb
30MIPS with 60 Nanosecond SIMM fitted.

The Blizzard 2040ERC is a super LOW COST board which offers A1500/2000 owners the opportunity to upgrade to the same performance as the Blizzard 1240T/ERC Board. Users will then be able to enjoy full A4000/040 power as well as take advantage of the built in SCSI-2 interface. The "ERC" Processors used on these boards are recycled and vigorously tested 68040 CPUs operating at 40MHz with MMU/FPU - excellent guaranteed competitively priced alternative.

CAN BE EXPANDED TO A FULL 68060

Blizzard 2040ERC Turbo...
40MHz 68040 and MMU/FPU, 0Mb 32Bit Fast RAM, expandable to 128Mb £309.95

1260 TURBO ACCELERATOR MEMORY BOARD

EASY TRAPDOOR INSTALLATION... No modification necessary. Reliable low heat output.

A1200 TURBO ACCELERATOR and MMU/FPU
50MHz 68060 - 0Mb Standard, expandable to 64/192Mb
38.71MIPS with single sided 60/70 Nanosecond SIMM fitted.

Offers Amiga A1200 owners FULL 68060 POWER with a board that simply plugs into the trapdoor slot. Your A1200 will then operate at TWICE or even THREE TIMES THE SPEED of an '040 based upgrade and up to FIVE TIMES THE SPEED of a standard A4000! Available options such as the SCSI-IV Kit and RAM are shared with the Blizzard 1230-IV and 1260.

Blizzard 1260 Turbo...
50MHz 68060 and MMU/FPU, 0Mb 32Bit Fast RAM, expandable to 64/192Mb — LOWER PRICE! £399.95

2060 TURBO ACCELERATOR MEMORY BOARD

A1500/2000 TURBO ACCELERATOR and MMU/FPU
50MHz 68060 - 0Mb Standard, expandable to 128Mb
38.71MIPS with 60/70 Nanosecond SIMM fitted.

Offers Amiga A1500/2000 owners the same specification as the remarkable Blizzard 1260 Turbo (A1500/2000s will operate at up to FIVE TIMES THE SPEED of a standard A4000) with FULL 68060 POWER and also includes built in SCSI-2 interface!

Blizzard 2060 Turbo...
50MHz 68060 and MMU/FPU with SCSI-2,
0Mb 32Bit Fast RAM, exp to 128Mb — LOWER PRICE! £499.95

1230-IV TURBO ACCELERATOR MEMORY BOARD

EASY TRAPDOOR INSTALLATION... No modification necessary. Reliable low heat output.

A1200 TURBO ACCELERATOR and MMU
50MHz 68030 - 0Mb Standard, expandable to 128/256Mb
9.91MIPS with 60 Nanosecond SIMM fitted.

The highest performing 68030 Accelerator available for your A1200. With its 50MHz 68030 and MMU, the 1230-IV offers BETTER PERFORMANCE at a LOWER PRICE. With a SysInfo rating of 9.91 (using a 60 n/s SIMM) you can see the 1230-IV is very fast... a performance gain of up to 500% is achieved! Via its Fast Expansion Bus, an optional SCSI-2 Controller module can easily be fitted. An industry standard SIMM socket provides for up to 128Mb of auto-configuring 32Bit Fast RAM (up to 256Mb with the SCSI-2 option using its extra SIMM socket).

Blizzard 1230-IV Turbo... £139.95 ~~£149.95~~
50MHz 68030 and MMU, 0Mb 32Bit Fast RAM, expandable to 128/256Mb
Fast 60 Nanosecond SIMM RAM Expansions - 32Bit, 72Pin £Call
Motorola Maths Co-Processor - 68882 PGA type FPU, 50MHz £Call

1230-IV, 1240T/ERC and 1260 FEATURES

- May be disabled with simple keystroke on boot up - for full games compatibility, even badly programmed/older software
- Battery backed self re-charge Real Time Clock
- High performance expansion with full 32Bit wide DMA
- Easy trapdoor installation - no modifications required (1240T/ERC fits in Tower)
- 1230-IV features PGA FPU socket allowing optional 50MHz 68882 FPU

Blizzard and Cyberstorm products use MOTOROLA 68000 series processors. They run **WITHIN** the electrical timing specification laid down by Motorola to prevent any possible overheating/reliability problems. So, when you pay for a 50MHz CPU for example, that's exactly what you get... not a 40, 33 or even a 25MHz CPU "clocked" to 50MHz! Look out for the **MOTOROLA MOTIVATED** logo - your guarantee of our commitment to quality and reliability - **BEWARE** of "clocked" CPUs! T/ERC and ERC processors used on selected boards are recycled and vigorously tested 68040 CPUs operating at 40MHz - an excellent guaranteed and competitively priced alternative.

What the Magazines think...

Blizzard products have consistently achieved the highest magazine accolades and awards!

Amiga Shopper *"...1260 is destined to become the ultimate object of desire for A1200 owners."* - **91% STAR BUY Award**
Amiga Computing *"...If you want the fastest Amiga in the World, get this board."* **92% BLUE CHIP Rating**
Amiga Format *"...Ride on the fastest A1200 in the World..."* - **95% GOLD Rating**

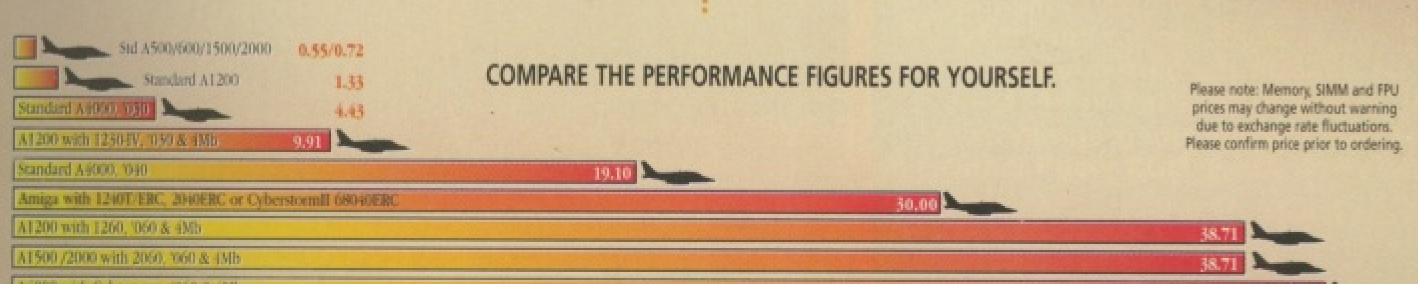
OUR RANGE HAS WON MORE AWARDS THAN ANY OTHER

BLIZZARD SCSI-IV KIT

SCSI-2 MODULE for 1230-IV, 1240T/ERC & 1260, with ADDITIONAL 128Mb SIMM SOCKET
(Fast SCSI-2 DMA Controller - upto 10Mb/s transfer rates with additional SIMM socket/extra RAM)

Blizzard SCSI-IV Kit... £89.95

COMPARE THE PERFORMANCE FIGURES FOR YOURSELF.



Please note: Memory, SIMM and FPU prices may change without warning due to exchange rate fluctuations. Please confirm price prior to ordering.

PLEASE SEE THE SECOND PART OF THIS ADVERTISEMENT ON PAGE 74 FOR OTHER PRODUCTS AND ORDERING DETAILS.

NEW... POWER UP

AMIGA™ GOES POWERPC™

POWER UP YOUR AMIGA

A further dimension is being added to the Amiga with our new PowerPC based BLIZZARD Power Board for A1200 and 1200 based Tower Systems, along with the new Power CYBERSTORM accelerators for A3000/4000 systems. You'll benefit from performance many times beyond the speed of the fastest 680X0 based boards.

Designed as upgrades for existing systems, Power Boards incorporate our innovative dual processor technology where a fast PowerPC RISC processor is combined with a 68k CPU, dynamically sharing memory and system busses.

While the original AmigaOS 3.x continues to run on the 68K CPU, supporting existing applications to provide backward compatibility, the PowerPC CPU is backed by comprehensive PPC Libraries which provide the functionality to integrate PowerPC into an Amiga multitasking environment.

Software developers can easily optimise their programs, step by step, porting single tasks to PowerPC code, which then run in parallel with 68k tasks. Leading Amiga software vendors are preparing ported or optimised versions of their software packages already. It is anticipated that a large quantity of software products supporting the PowerPC will be available soon.

Power Boards will be delivered with a comprehensive suite of utilities, including the PPC library, as well as tools for creative users. Among them is a Public Domain GNU C compiler for PowerPC (including sourcecode), many demo programs and utilities with sourcecode. In addition to this software, free developer support is available via FTP site.

Last but not least, a PowerPC optimised version of CyberGraphX V3 with RISC optimised CyberGL/3D plus MPEG functions and libraries is included (along with a special GGX driver to support the AGA chipset) with full and comprehensive documentation.*

A1200

The BLIZZARD Power Board will be supplied with the fast 180MHz 603e incorporating a PGA socket for insertion of a standard 68030 companion processor. The board provides a fast memory expansion facility, dynamically shared by the two CPUs, using standard SIMMs. An optional inexpensive Fast SCSI-II controller will be available combining transfer rates of up to 10Mb/sec with the flexibility and expandability of the SCSI standard.

With its 180MHz 603e processor, BLIZZARD 603e Power Boards provide a raw performance of approximately 170 MIPS or 3.5 SPECint95 and 2.8 SPECfp95*. Blistering performance that competes with most of the fastest PC systems around today.

Performance like this ensures BLIZZARD 603e Power Boards are ready for the most demanding of tasks such as... 3D rendering, high-speed 3D gameplaying, image manipulation, animation, video facilities and many other applications that depend upon fast CPU performance.

A3000/4000

CYBERSTORM Power Boards for Amiga 3000[T], 4000[T] and systems with compatible CPU slots, offer blistering 604e performance - more than 10 times faster than any 68k based accelerator on sale today! Available with clock speeds of 150, 180 and 200MHz, the companion socket for the 68k processor accepts either a 68040 or a 68060.

The board provides 64-bit wide extremely fast memory expansion using pairs of standard SIMMs, dynamically shared by the two CPUs. Additionally, CYBERSTORM PPC comes with a DMA driven Wide ULTRA SCSI controller on board offering transfer rates of up to 40Mb/sec for even the most demanding of professional applications. A 32Bit high speed expansion connector, with DMA access to the main memory, is also provided for later upgradeability.

• The 200MHz version of the CYBERSTORM PPC provides performance of more than 350 MIPS or approximately 8.1 SPECint95 and 7.1 SPECfp95* - breathtaking speed that goes far beyond that offered by most PC systems.

In the second half of the year, an advanced graphic board will become available for the CYBERSTORM PPC expansion slot, providing a subset of the innovative CAIPIRINHA custom chip. By having a stand alone version of the DLRP (Display List Risc Processor), this board will offer superior display capabilities through higher VRAM-based resolutions, pixel depths and speeds, as well as the potential to begin developing software supporting the functionality of the forthcoming A\BOX system.

PRICING AND AVAILABILITY:

Options with or without 68k CPUs will allow users to fit the CPU from their existing accelerator.
Special prices will be available to both BLIZZARD and CYBERSTORM board users. Delivery of Power Boards is scheduled for Summer 1997 following finalisation of CE approvals. Call now for full details.

**Quoted performance figures are estimations based on specifications from Motorola/IBM and are relevant to the PowerPC processor only.*

Super CD-ROM 11

The new CUCD-ROM 11 is one of the best CUCDs yet, complete with ProPage 4.1 and two audio tracks.



Welcome to CUCD11. An even spread of software through all the normal departments means that CUCD11 has something for everyone. This is one of the best CUCDs yet!

CUCD11 can be booted from a CD32 or an A1200/4000 with adequate CD32 emulation. To allow you to use this CD just as well when you boot up from your own Workbench, we have included the INITCD icon, which will make various assigns to allow software to run from the CD. It also initiates MUI and the NewIcons systems – so don't be surprised if the look of your Workbench suddenly changes. It is all temporary and can be removed by clicking on InitCD again. To help you find your away around the CD, there is a DOCS.GUIDE, which connects you to pretty much every text document on the CD, and INDEX, a search tool which allows you to search the CD for a text string. Like everything on the CD, click on them to activate.

Making things work

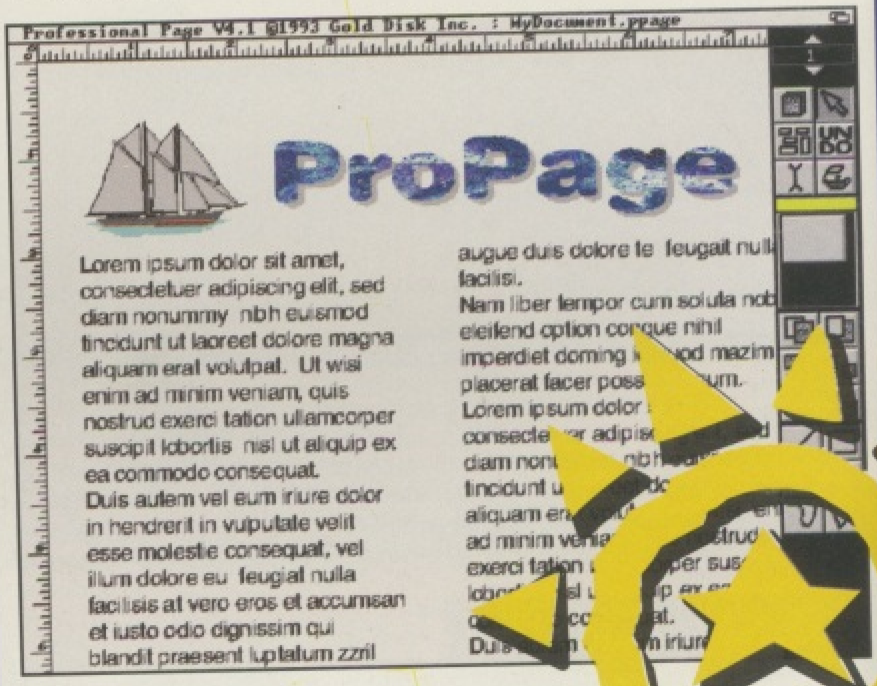
Click on a picture icon and a viewer loads up and displays the image. Click on a mod and a modplayer pops up and plays the tune. As much as possible of the software will run from the CD as well. However, some things on the disc won't run when you click on them. There are several reasons for this. If it is a picture or animation you may not have enough memory. If it is a demo it may clash with your system. If it is a utility it may need to be installed and so on. If a program doesn't activate, and no error message comes up, read the documentation.

It can get complex with games and demos. Many are written in an OS illegal fashion, which means that they may not work on every set up. Run the bare minimum Workbench and try them. If this still doesn't work, boot with no startup sequence and activate the program from the shell. You will need to know AmigaDOS well for this.

On the disks

Professional Page 4.1

The full version of the top quality commercial Amiga DTP package can be found here. Run it from CD or drag it onto your hard drive to install. See the full instructions on page 8.



The Sun

This quirky but fun amateur game was programmed by Matt West in AMOS Pro. Also see the game instructions on page 6.

The audio tracks

There are two audio tracks on the CD this month, which can be played on any hi-fi CD player. Don't play track 1, which is data.

Track 2 is a track from James Bernard's band, Inhaler. This song, entitled Falsificator, comes from their album, Volume (released on the Saucer label, cat. no. LLL 2030), which Kerrang! magazine described as "... rock you can't headbang to and techno you can't dance to!".

Inhaler use a set-up consisting of an A1200 running the CU Amiga cover disk of OctaMED version 5 and a Megalosound sampler, Kawai K1 and K4 keyboards, an Alice 8 channel mixer, a DTC-690 DAT recorder and various guitars and effects units.

Track 3 is called Caterpillar, and is by our fearless editor, Tony Horgan. Read all about it in Sound Lab on page 84.

What's in your drawers?



Root: The root directory of CUCD11 is set up like a Workbench disk, with all the standard directories – C, Devs, Libs, Fonts and so on. You will find that these directories are all nicely packed full of files you can use on your own Workbench if you want.

There are plenty of libraries, fonts and so on. If you want to copy anything across to your own system, just use a directory utility such as Directory Opus.

The Sun: Click to play.

ProPage: Just drag the drawer and click on "Make_PPage.ini".

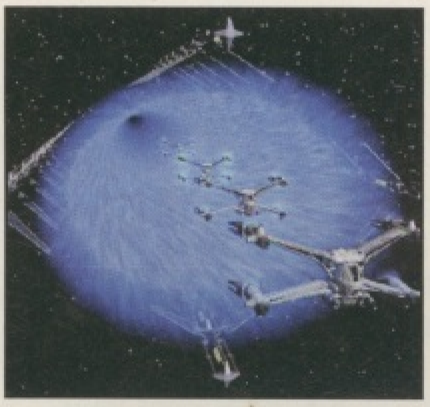
System: Delitracker, Hippoplayer, GmPlay, NewIcons, ParNET, Flick, Viewtek, VirusZ and more have moved into a new drawer called CDsupport in the System directory. MUI and the standard Workbench system files remain in the parent.

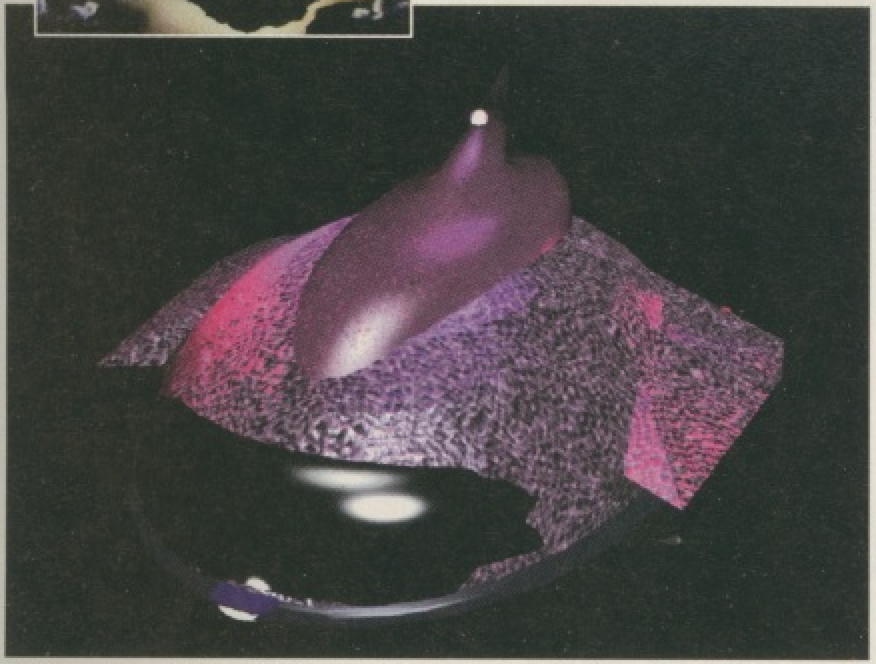
Tools: A fairly standard Workbench tools drawer.

Prefs: Standard Preferences drawer with Newicon prefs.

Utilities: Multiview, Clock, Toolalias and some NewIcon utils.







▲ These pics are in the CUCD/Graphics/Pix drawer. The big picture is called shuttle and is an Imagine 4.0 render by Ben Bright, a rather sizeable 736 x 566 pixels.

WWW: Demo versions of the major Web browsers; Ibrowse 1.1 and Voyager NG are here plus the brand new Aweb 3.0 demo. There are also pages to browse without a modem!

Check out CU Amiga's brand new Web site plus the usual Amiga related and general sites. All you have to do is click on the Show_WWW icon and then select which browser you want to use when asked.

CUCD: Here's where you'll find the really good stuff.

Online: For comms heads we've got the latest version of the Microdot II E-mail and news package, a demo of Termite TCP and the unregistered Miami 2, accompanied by Miami Speed Meter.

CD-ROM: Due to the problems with last month's CUCD10, we've got a special installer for AmiCDFS2. There's also the contents of the latest AminetCDs, Atapi_PnP V3 and even more CDIDs.

Graphics: For artists, renderers and tinkerers alike, we've got a collection of CyberGraphX goodies, SuperView-TNG, MPEG video players and animations and yet more Icon collections!

Programming: Coders ahoy! The complete Oberon V4 for Amiga programmers, the CyberGraphX developers kit, latest Storm C++ demo and a lot more.

Demos: Another bumper collection of demos to amuse and amaze your friends. The central feature this month must be the new installment of the awesome and popular DataWorld demo.

Information: Lots of hard core technical information can be found here in the form of the A1200 and A4000 hardware guides. There's also an animation FAQ and an AmigaGuide to Startrek. A lovely bit of bed time reading.

Utilities: Utilities galore with the excellent SysInspector, PC2Amiga with the latest Datatypes thrown in to boot. Plenty more here to help your Amiga be more productive.

Readers: We've got a great collection of readers pictures sent in from around the world. If you fancy being in here yourself, don't delay, send your disks to us today!

Games: More fun joystick waggling to be had in here. Games of all styles can be found but be sure to check out the latest preview of the forthcoming Trapped II 3D game.

Magazine: To tie in with current and past Magazine features, we've got the latest version of the AVM Fax package and demos of the CD-R writing software, MakeCD 2.2 and Burn It. Not forgetting the top secret Genetic Species preview either.

Previews: Check out the comprehensive demo of the top class spreadsheet TurboCalc 4, plus the IIP CD-ROMs.

Sound: The latest version of the MPEGA 2.4 MPEG audio layer 3 player. More MIDI tunes and some top modules round off this month's audio-fest.

If your CUCD does not load

If your CD does not load contact Diskxpress on 01451 810788. If they advise that the CD is faulty send it along with a SAE to: CU Amiga Magazine Disk Returns, Diskxpress, 7 Willow Court, Bourton Industrial Park, Bourton on the water, Gloucestershire GL54 2HQ.

Please note that some CDs will not autoboot on systems other than CD32s, so try loading it from Workbench first.

Join Us On The Net Right Now!

CU AMIGA MAGAZINE *Online*



Bring yourself bang up to date on all things Amiga courtesy of our brand new CU Amiga Magazine web site. We've totally redesigned the whole site so that now it's bigger, better, faster and even more fun than ever before.

For those who don't yet have Internet and world wide web access, we've included the new incarnation of the site on this month's CD edition of the magazine, so go and take a look around it right now.

You'll find plenty to keep you amused and informed, including news, features, downloadable software and plenty of links.

Find out about forthcoming issues, order back issues, take advantage of our new subscription offers, chat to the CU Amiga team and check out this month's Art Gallery images at full screen size. This is just the beginning, and it's only going to get bigger and better. So what are you waiting for?

- **Latest Amiga news and info**
- **Exclusive features on-line**
- **Megabytes of downloads**
- **Contact the CU Amiga team**
- **Full of top Amiga links**
- **Fast Amiga-friendly design**

Get Connected NOW!

http://www.cu-amiga.co.uk

"World of A1200" & "Top 100 Games" or "Epic Encyclopedia" (1996 Version. Can be upgraded to 1997 version for £12.99) CDs FREE with every CD ROM drive!!!

CD-ROM DRIVES

TOTAL SCSI CD-ROM DRIVE



Fully featured SCSI CD-ROM drive for use with the A1200 or A600. Features include superb metal enclosure with in-built mains power supply. Includes all software, cables and instructions for immediate use. Full CD32 emulation and Audio CD player software included. No extras needed! Just plug in and go. Choose either PCMCIA fitting Squirrel interface or internally fitting Dataflyer SCSI interface.

TOTAL CD-ROM DRIVES
- 2 speed £129.99
- 4 speed £149.99
- 6 speed £159.99
- 8 speed £209.99

Prices include Squirrel. Add £30.00 for Dataflyer or Surf Squirrel

STAR VALUE

ULTRA CD-ROM DRIVE

Superb IDE CD-ROM drive system for the A1200. Fully featured, top quality drives in a top quality enclosure with built in power supply. All cables, instructions, software including CD32 emulator and audio CD player etc., included for immediate use. The CD-ROM interface supply plugs inside the A1200 (exceptionally easy to fit by anybody) and provides a connector in the blanking plate at the rear of the A1200, next to the mouse socket.

PLEASE PHONE FOR FURTHER DETAILS AND INFORMATION SHEET

ULTRA 4 SPEED £169.99
ULTRA 8 SPEED £199.99

HARD DRIVES

2.5" HARD DRIVES

Our high speed 2.5' IDE hard drives for the Amiga A1200 & A600 computers come complete with fitting cable, screws, partitioning software, full instructions and 12 months guarantee. All drives supplied by us are formatted, partitioned and have Workbench (WB2 for the A600 and WB3 for the A1200) installed for immediate use. Fitting is incredibly simple; if you can plug the mouse into the mouse socket, you can plug the hard drive into the hard drive socket.



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FREE **'HOW TO FIT YOUR HARDDRIVE'** video and Stakker disk to increase the drive's capacity with every hard drive ordered

A500/+420mb Hard Drive £209.99

340mb	£109.99
540mb	£139.99
1000mb	£174.99
1800mb	£209.99

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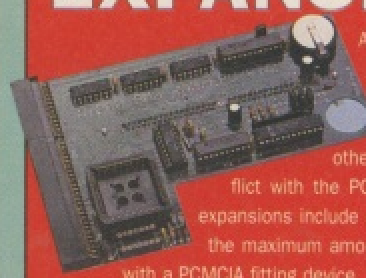
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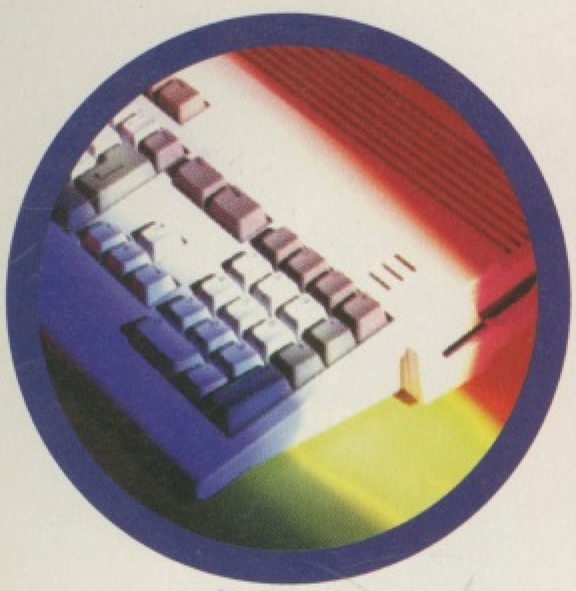
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News

SPECIAL REPORT

Gateway to the Millennium



On March 27th 1997, American PC retail giant Gateway 2000 put in a bid for Amiga Technologies. This bid has now been passed by the German regulatory body. Gateway 2000 are now, officially, owners of the Amiga.

A press conference is scheduled for xxth May 1997 in which it is hoped Gateway 2000 will publicly announce their future plans for the Amiga range. As we reported exclusively in our additional news flyer last month, Gateway 2000 are the new owners of the Amiga, but the big question is what they plan to do with it. At the time of going to press, they are staying resolutely tight-lipped, obviously obeying strict orders from the top to say nothing, not even rising to the insistent bait offered by the info-hungry Amiga press and users, testing for reactions to suggested moves they might make.

What we do know is that Amiga Technologies will morph into Amiga International, remaining a separate company but owned by Gateway 2000..

Amiga International is to be headed by Petro Tyschtschenko, former boss at Amiga Technologies. Tyschtschenko, who has been at the helm during the period since Escom's collapse last year, has been involved in the Amiga since the Commodore era and is considered by the industry to be a safe pair of hands. Internet users have noticed that the Amiga Technologies web site has quietly changed its name already.

Gateway have been rather quiet on the buyout since the news hit, preferring to avoid making any major announcements until they have some good idea of what they have bought. After the willingness of certain other rather less professional bidders to make bold and rather rash press announcements, the international Amiga community has been rather jittery about the silence from Gateway 2000. This silence, rather than suggesting any kind of conspiracy, is the reticence you would expect from a major company not willing to make bold statements before they are sure where they are going.

When pressed on the point during a questions and answers session at the Information Technology Expo held in Seattle on April 2nd, Gateway's CEO Rick

Big fish eaten by bigger fish?

In a weird, sick twist of the kind that only happens in real life, mere days after Gateway bought out the Amiga, the information technology business world was buzzing with rumours that Gateway itself was going to be bought out by Compaq, the world's biggest computer retailer. Rumours suggested that Compaq were looking to use some of their $3.5 billion cash reserves in a hostile takeover of one of their fastest growing rivals. The rumours lead to heavy trading of Gateway shares, and a significant increase in the share price during a period in which IT shares have generally not been performing strongly.

Before everyone panics and stories of "the Curse of Amiga" become rife, we should issue a note of caution. Rumours of this nature are the life blood of the markets, and are far more common than actual buyouts. Officials from neither Compaq nor Gateway were commenting on the rumours, but it seems more likely that Compaq would use that cash reserve on a company that was a little less highly valued in the market.

GATEWAY2000

"You've got a friend in the business."®

> **"I am convinced and know that Gateway 2000 will give Amiga International a very good future."**
>
> Petro Tyschtschenko, manager of AI.

Snyder, explained that at that point it was not possible to be specific, and went on to describe the purchase as "... an equivalent of a large box marked 'stuff'..." and pointed out that until the German regulators passed the acquisition, they wouldn't know for sure what they would find of use in that box. In a further comment which can only come as a reassurance to the Amiga community, he is quoted giving as a reason for the buy-out, "Gateway could not let a technology like that die".

Amigas on sale

Petro Tyschtschenko has announced that the most immediate sign of the rebirth of the Amiga is that Amigas will soon be on sale (mainly A1200s but some A4000s). It's likely that this represents a sell-off of existing stock. Pricing at the moment looks to be slightly cheaper than the old Escom prices: A1200s at around £250 plus VAT, A1200HDs at £360 plus VAT. Distribution will be through the traditional Amiga channels – there are currently no plans to direct Amiga through Gateway's own distribution systems.

Phase 5 Co-operation?

It seems likely that Phase 5 and Amiga International will be linking up in some form, after the close ties that were beginning to form just before the demise of Escom, the Amiga's former owner.

In their favour, Phase 5 have a relatively cheap instant upgrade to the existing Amiga technology in the form of their PowerUp PowerPC acellerators. If Gateway are looking to get an early foothold in the entry-level computer market, they would do well to tag on PowerUp cards to new A1200s or better still, integrate them with any new or stop-gap Amiga machines.

Phase 5 MD Wolf Dietrich commented "... we are open for a technical co-operation which would result in nearly immediate availability of powerful and inexpensive new technology for the Amiga".

Amiga Technologies have told us that they have discussed co-operation with Phase 5 following a contact between the two companies described as being mutually instigated. Co-operation between the two companies would allow an official PowerPC Amiga based on the Walker to be produced in relatively short order. Specifications could be expected to include a PPC 603e CPU running at 133mhz, 2Mb chip and 4-8Mb fast Ram, 500k – 1Gb hard drive, CD-ROM drive, AGA chipset and an HD floppy drive, and based on previous pricing could retail for around £900. The importance of the geographical proximity of Amiga International and Phase 5 (both in Germany) should not be under estimated as a factor in the success or failure of this particular development. For a first hand experience of the PowerUp cards, check out the CU Amiga stand at the World of Amiga show, during May 17th-18th. ■

A thousand possibilities...

There has been endless speculation on the fate of the Amiga since the Gateway buyout. Industry pundits were universally taken by surprise by the move, and many have suggested reasons beyond the obvious one of a mid-priced machine of the type the European market looks desperate for. We have been taking a close look at Gateway and the Amiga to see which of these theories might have a basis in fact.

Set Top Boxes: Viscorp wanted to buy the Amiga because they saw it as being the ideal basis for a machine to challenge the world in the set top box market. Set top boxes are a very advanced equivalent of a satellite decoder. As well as internet access a set top box would in theory allow the user access to all sorts of digital services from on-line gaming to home shopping. The highly efficient nature of the Amiga's operating system makes it able to do these functions with a considerable saving in hardware costs. Gateway have been spreading into the multimedia arena but Tyschtschenko is quoted as saying that no-one plans to use the chips, motherboard or OS for anything other than Amiga computers.

Palmtops: One industry pundit has pointed out that Gateway have no presence in the palmtop market and have suggested that Gateway wanted the Amiga technology for use in palmtops. The theory behind this would be again down to the efficiency of the operating system – Amiga OS works with very limited hardware – but the hardware which Amiga OS currently runs on is not really designed for small sizes.

Badged PCs: The choice of the pessimistic observer, this is about the least likely option. Although the Amiga has a very good name amongst people in the know, the general computing crowd tends to think of the Amiga as a games machine.

Amiga PCI boards: The Amiga chipset and OS could be implemented on a PCI card to be used in a desktop PC. The logic behind this is in fact a little out of date – the Amiga chipset is too old to stand up to the best PC chipsets, and this just leaves the OS, in which case why not just code a Pentium native version of Amiga OS?

Alternative OS: There is actually some possibility that this was at least in the back of the minds of whoever decided Gateway should buy the Amiga. Gateway are known to be very Microsoft/Intel oriented retailers, but the relationship is not quite as cosy as is often assumed. Gateway investigated the possibility of buying into MacOS recently, suggesting that they may be uneasy about Microsoft's OS dominance.

Network Computers: Computers that are permanently connected to a network and use on-line storage and processing instead of their own are the kind of thing that Amiga OS would be brilliant at doing given its high levels of hardware efficiency. What is more, Motorola have a very wide range of embedded systems CPUs with built in comms hardware based on the 680x0 series. An NC running Amiga OS on such a CPU would make for a very powerful and very cheap set-up. Interestingly, we have heard that Gateway's CEO Rick Snyder has voiced discontent with the way that Microsoft have been trying to pre-empt competition in the NC market by announcing the specifications of their Windows NT5 based NC OS as a proposed standard before it is anywhere near completion, a move some pundits suggest is their way of getting a stranglehold on the NC market before it even exists.



Stateside News

by Jason Compton: Editor in Chief of Amiga Report Magazine

St Louis Gateway Show report

The great irony of Gateway '97 is that it was held during a bankruptcy which was about to end just a week or two after the show was held – after Gateway 2000 had their bid for the Amiga accepted.

Still, a little prolonged bankruptcy proceeding isn't enough to kill the spirits of many Amigans, and they made the trip from all over the United States and Canada to be at the show. The show was filled with high points – the initial low point was QuikPak's failure to attend, although QuikPak's CEO maintains that the Gateway people were told that QuikPak would only be at the show if there was a bankrtupcy resolution by the date of the show, and of course there was not. In retrospect, we now can be pretty sure we know why.

Major planning

The St Louis people took over a year to plan, and it showed. Television and radio ads were used to help promote the event, as were several mailings of flyers about the show to Amiga users across the country.

Two major dealer booths anchored the retail end of the show. The biggest was National Amiga, who were continually busy in their U-shaped zone. Product diversity seemed to be the key, as people commented that National had at least one or two of everything. They had an awful lot of Insert104's, the new PC keyboard interface for big-box Amigas that National is marketing.



▲ Nova Design maintained their presence in the Amiga scene with another showing. Although Alladin 4D is still not with us, Kermit Woodall was on hand for questioning.

Siamese display

There wasn't much in the way of new hardware at the show, although National had just received a shipment of scan doublers for the CyberVision 3D and Y/C Plus was showing a line of rebadged Philips TVs capable of VGA output. The Siamese System was also on display, but more about that later.

One of the most interesting pieces of hardware at the show was brought by Jim Goodnow, who did a lot of work for VIScorp recently. He brought a VIScorp set-top box prototype which ran AmigaOS 3.1 and a development version of VIScorp's networking software. It was the first time I'd actually seen a VIScorp box work, and to my knowledge the first public display of AmigaOS on a non-Amiga or Draco machine in the United States. It's still not clear if anything will ever come of VIScorp's work, but Jim had proof positive that the VIScorp engineers have at least something to show for their efforts.

A few user groups set up their own area to sell general merchandise or promote specific products. AmiTech of Ohio was selling Eric Schwartz T-shirts, featuring many of his cartoon creations whilst Amiga Atlanta was still selling copies of their year-old 10th anniversary banquet video.



▲ Is there no end to the hunger for Amiga-related bits and pieces? Amiga mugs were just one of the Amiga-badged 'gift ideas' on sale at the show.

Magazines

The US' only remaining native newsstand Amiga magazine, Amazing Computing, was there in good force, and their booth also hosted Keith Siders and his AmiFast A3000 SIMM card. If by chance you have an A3000 and are looking to increase the motherboard RAM, you might consider doing yourself a favour and checking out the AmiFast rather than screwing around trying to find ZIP memory. AC editor Don Hicks was among the most animated people at the show, working to drum up new subscriptions and new enthusiasm among the showgoers.

Product developers were well represented. Newtek sent about a half-dozen technical and sales people to the show at a professionally presented booth, although certainly nothing of the size they would use at a larger video industry show. They committed something of a faux pas in their choice of Lightwave hardware platform: they brought a high-speed Alpha machine running Windows NT instead of an 060 Amiga. This didn't go over well with some of the show's visitors. I can see their logic, "Well, we're showing off our flagship product, we should show it on the fastest machine we can find, right?" Well, yes and no…

Nova Design, the makers of ImageFX, were there showing their demo video and selling ImageFX at a deep discount. Their new presentation guru, Corinna Cohn, stood on chairs every so often to draw attention to the booth. Corinna's artwork is quite good and fairly well known in the Amiga world, and Nova Design will be using her to do customized ImageFX seminars across the country.

Richard Kiernan of HiSoft was on hand Saturday, and had hoped to show off Cinema4D 3 and IBrowse 1.1 but his shipment never quite showed up. He did answer questions and talk to users and developers, however. HiSoft's American distributors,

Oregon Research, were unable to personally attend but they did have a table manned by a volunteer and the company's president sent a letter apologizing for not being there.

Anti-Gravity

Another of the UK's native sons, Paul Nolan of Photogenics and Siamese System fame, was hosted by Anti-Gravity Products. Anti-Grav is a large dealer who focus on video products, but for this show they turned their entire area over to Paul and his Siamese System, which he endlessly demonstrated to curious passersby. Working in his favour was the Eagle A4000T, something Americans don't see much of. We're used to the more bland QuikPak A4000Ts.

IAM, Dale Larson's company, famous for the book Connect Your Amiga, and infamous for their book Torn Shapes of Desire: Internet Erotica, were there to sell a number of products at show discounts and give away Amiga and Commodore logos to their customers – a very popular promotion. While IAM has had distribution problems in the UK recently, these seem to be coming to an end. The company has a new book coming soon which is difficult to describe – its author, a reknowned American journalist who has lived in Mexico for the past 20 years, comments on and ponders the Internet and technology, and seems to tell the reader more about himself than about his chosen topic. Of course, if you're not a big reader, you would have been more interested in the DiskSalv and MRBackup combination they were selling,instead.

Silent Paw Productions was showing off the PAWS A1200 portable which is still an impressive feat. Silent Paw is apparently very unhappy with QuikPak right now over a non-payment of invoices for the QuikPak portable machines that have been heavily hyped but little-seen so far. The LCD technology seems to have originated with Silent Paw, and they'd like their money or their screens back.

Self-promotion time: Amiga Legacy was announced at the show, a new videotape based



▲ **Dale Larson and copany proved popular with hand-outs of Amigfa and Commodore badges, and managed a bit of promotion for his Connect Your Amiga book.**

magazine to be published 5 times a year, 3 in the remainder of 1997. I'm involved with the project, and our area did attract people to check out our rolling demo tape. I think the video monitor with all the junk hot-glued to it did the trick. Legacy might be published in PAL in Europe and Australia, we're discussing it with potential partners now.

Offical banquet

Various other exhibitors were in attendance as well – some with small areas or only promoting one product, like Grafica and their MoneySmart program, or the understaffed Soft-Logik booth.

There was an official show banquet held after the first night where a panel discussion group fielded questions from the audience. Most revolved around the survival of the Amiga and Amiga-related companies. The following morning a developer meeting was held where dozens of current or potential developers discussed possible routes for cooperation and standardization of certain neglected issues, like new animation and image formats.

Kermit Woodall of Nova Design chaired the meeting, which tackled the issue of establishing new and needed standards for developers, such as video and animation formats Commodore and AT never made an official part of the Amiga's operation. The issue of creating a standard mini-HTML viewer as a replacement for AmigaGuide came up, and unfortunately broke down quite quickly into an anti-MUI and even anti-ClassAct debate. However, some good energy came out of the meeting and we're looking for more to come out of this cooperation.

PowerUp

Developers and users alike were very interested in Nova Design's newest toy – a Phase 5 PowerPC developer daughtercard. Nova didn't have it plugged into anything, but the rather plain-looking piece of PCB was shown off briefly on the second day of the show. Nova seems geared to support Phase5's 3D and PowerPC technologies, and we will hopefully see these newfeatures soon.

Announced at the show was an allegedly upcoming Amiga Ethernet card, with 10BaseT and AUI hookups, that would go in a Zorro slot for only US $100. If it becomes a reality, it could make Amiga networking truly affordable. An A1200 version is also planned to hook up to the A1200's internal clock header, much like the new HyperCOM high-speed serial port does.

On both days, the show organizers held raffles. While QuikPak was expected to bring a 4000T, this didn't happen and a used A1200 had to be substituted by the show organizers. Nevertheless, that and a number of other products, including Lightwave 5, were given away and a lot of people were happier when they left than when they got there.

The mood at the show seemed very optimistic. In particular, getting to meet many of the people who have brought so much to Amiga users lives was a big boost for them. Holger Kruse of Miami TCP fame was at the show, and more than one person (myself included) shoved money into his hands on sight just so they could be honest and finally register Miami. I did guilt him ever so slightly first for never sending us anything for review, but made him take my money all the same, because Miami is just that good. There's a lesson there – if you're a shareware author whose product is popular, go to Amiga events and just make sure people know who you are. They won't have any good excuses left not to give you the money.

The show's "mascot" was a big yellow smiley face and the slogan was "The Smile Is Back". While not as large as the winter Toronto shows of 1995 and 1996 in this post-Commodore era, it was more impressive than the rest of the crop of the past few years. Everyone asked about Gateway '98, – time will tell.

Other news

In other news: US based Finale Development has taken over the rights to the Voodoo e-mail package and plans to bring the once-shareware package to a commercial status, bundling a "lite" version with its Finale Web Cruiser WWW browser as well as selling it as a standalone package. Finale's first new products are scheduled for release starting in late spring.

Davis MacGyver of Canada has announced availability of the Chameleon tower conversion for desktop A3000s and A4000s, marketed directly and through Oshawa Amiga of Oshawa, Ontario, Canada. While expensive (over US$500), the optional extra TBC slots (powered but not bus-connected PC slots used for TBCs and other video hardware) should prove attractive to video professionals. The towers also boast 9 drive bays and multiple fans. MacGyver also distributes a remaining stock of A-Max Macintosh emulators. A-Max was technologically left behind some time ago, but the Zorro II card of the A-Max II+ and A-Max IV is one of the few things which allows access to 800k Mac floppies – if you're in need of that sort of access the US$135 is almost worth the price of admission. MacGyver can be reached at +416-285-7121, or www.interlog.com/~davmcgyv online.

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Vulcan Software To Go CD Only

Vulcan software, probably the biggest Amiga games producer in the UK, have decided to convert their production to exclusively CD-ROM releases. This shock announcement is bound to cause major controversy – the Amiga market in this country is a bit behind the rest of Europe in joining the CD-ROM revolution, and Vulcan are taking a risk.

The PC market switched from floppy to CD-ROM a few years ago in a move that was lead by the market – publishers moved to CD first, the public followed out of necessity. This is the position that Vulcan want to promote in the Amiga market. It is the general feeling in the Amiga market that if the Amiga is to survive as a viable software platform, it must get a larger installed base of CD-ROM users.

Vulcan believe that the risk is one that must be taken. They cite piracy and packaging costs as major reasons for going CD-ROM only, and point out that stockist, particularly overseas, are increasingly unwilling to carry games that aren't on CD. Another major reason for the change is that the software of today is just getting too large to fit on floppy disk. Vulcan were originally planning a floppy disk version of their forthcoming Hell Pigs game, but the realisation that this heavily cut down version would take 22 floppies must have had some impact on their decision, especially as DD floppy disks are now considered non-standard in the disk duplication business.

The next year will be a critical one to the future of Vulcan, and CU Amiga magazine wishes them the best of luck in this brave venture. Contact Vulcan Software on: 01705 670269. Email: Paul@vulsoft.demon.co.uk

AUI RIP

We are sad to announce the closure of yet another Amiga magazine. Amiga User International, well respected for its highly technical coverage and independent stance, has published its last issue. AUI started in 1987 as a free insert in Commodore Computing International, becoming a subscription only magazine under the name Commodore Business and Amiga User, which soon turned into a full magazine available from newsagents.

CU Amiga's editor Tony Horgan launched his Amiga career with AUI, and fondly remembers mailing out some of the very first subscriptions by hand. Antony Jacobson, managing editor and publisher, kept the magazine going despite the odds through some tough times, but insufficient circulations and advertising revenues finally took their tolls.

Imagine Sticks With Amiga!

Impulse, the software company behind the enormously popular Imagine rendering package, have promised that they will release a version 6 after all. One of many Amiga developers moving to the PC, Impulse have been threatening to pull out of the Amiga market for some time now, but have been reluctant to abandon their traditional home. The significant decrease in sales of later versions of Imagine lead them to release version 5 to the Amiga community at the ridiculously low price of $100 US plus shipping in the hope of firing up some interest.

The response to this last gasp effort was better than expected, and Impulse have sensed a new confidence in the Amiga market. According to Impulse's Larry Halvorson "Impulse is excited about the future and the rebirth of the Amiga".

Imagine 6 will be published as part their Amiga Constant Upgrade Scheme (ACUS), where in the future, instead of major updates every couple of years there will instead be a programme of continual upgrades for registered users. Cost will be $100 for registered users of version 5.

For more information, phone Impulse in the USA on (+1) 612 4250557 or http://www.coolfun.com/amiga.html

PSU Connectors For Tower Converters

Intrinsic Computer Systems can now supply the non-standard Amiga power supply connectors, making DIY PSU upgrades cheaper and easire than ever.

ICS, who are currently putting the finishing touches to a full tower kit (to be reviewed next issue with any luck) have put in an order for these rare parts which are due in stock by the time this magazine hits the shelves.

We detailed how you can convert an off-the-peg PC power supply for Amiga use in the May 1997 issue, complete with wiring diagrams. The availablity of the plug means it is no longer necessary to cut up the existing A1200 PSU, which would of course render it useless. For the concluding part of our tower conversion series, see page 30 of this issue, in which we tackle the exciting options available to you once your Amiga is granted Zorro capability.

ICS also supply a range of custom cables for tower conversion projects. They can be contacted on 01474 533500.

News in brief

Big Red Correction

In last month's issue we listed Core Design and Dynabyte as publishers and Power Computing as suppliers of Big Red Adventure. Dynabyte are the developers, and Power Computing the publishers. Core published the PC version but had nothing to do with the Amiga release.

For more information, contact Power Computing on 01234 851500.

AAA Awards

The Amiga Computer Group in Sweden has announced an annual Award for Amiga Achievement. They hope that this will help to bring the Amiga community together. The first awards, decided by Jury, were given to David Haynie (International) and Thomas Svenson (Swedish) at the Amitech show in Stockholm over the 25-27th of April. ACG are accepting nominations for next year's awards. Point your browser at http://www.amiga-cg.se/aaaa/

AHI Reaches 4

Martin Blom has announced the availability of version 4 of his AHI retargetable audio software. AHI now supports Paula (the built in chip), Aura, Delfina DSP, Draco Motion for Draco systems, Prelude, Toccata and Wavetools. AHI can handle 128 virtual sound channels in real time and can do non-real time 32-bit rendering with linear interpolation and mixing at up to 96khz. AHI has a homepage at http://WWW.lysator.liu.se/~lcs/ahi.html

Amiga Trainspotter

The winner of our Ultimate Amiga Trainspotter competiion, as run in the January 1997 issue of CU Amiga, is Ben Hutchings of Oxford, who gets a load of exlusive Amiga kit as a prize. We'll try to get a picture for next issue.

Eyetech's Spring Specials: Full A1200 towers from £119.95; High speed A1200 serial port £49.95; Accelerators: '030/25MHz/FPU £79.95, 040/25MHz £189.95, '060/50MHz £439.95; Data/fax modems from £29.95; NEW - SX32Pro-33SE - £299.95; SX32Pro-50 £349.95; SX32MK2 £189.95; Enhanced PSU's from £39.95; 100MB bootable IDE Zip drives £119.95; CDPlus system from £139.95; Mousemat 99p

The Top-Rated Eyetech *CDPlus* for the A1200 2-speed and 8-speed CDROM drives



The CDPlus and SyQuest EZ135 drives. The IDE Zip Drive is the same size as the EZ135

- 2- or 8- speed external CDROM unit in quality CE-approved case with heavy duty PSU
- Leaves trapdoor free for accelerators / memory expansion and the PCMCIA slot free for digitisers, modems, samplers etc
- Option to add additional HD's, CDRoms, SyQuests, *IDE Zips*, Jazs, ATAPI tape streamers etc powered from the CDPlus unit
- Comes with special Eyetech *'060-compatible* Mk2 4-device EIDE buffered interface board - easily fitted in minutes with no cutting/drilling (Note that IDE CDROMS *must never* be directly connected to the A1200 without a buffered interface)
- Gold plated audio phono sockets* at rear and front panel headphone socket and volume control
- Complete with 'Click-and-Go' installation software

(*Not on DT/MT)

What do the reviewers say?

Amiga User International - 97%
"... It all worked faultlessly ... "
Amiga Format - 96%
"... An absolutely superb bit of kit.."
Amiga Shopper - 90%
"... This is a quality product..."

Amazing Value - Prices Down
8-speed - *only £189.95*
Special Purchase - Limited Availability:
Upgradeable* 2-speed - *just £139.95

The *CDPlus* is also available as a full kit but without CD mechanism - so you can fit your own - for £119.95



The CDPlus MiniTower & Desktop cases (styles may vary)

Considering a PowerStation?

The CDPlus is now available with an alternative*, 230W, CE-approved, PC MiniTower or Desktop case (which can also power your A1200) - *for only £20 extra*

NEW! **...Or get a full A1200 Custom Tower* & fitting kit for your A1200-motherboard - with 250W PSU - *for only £99.95 extra***
(*as an alternative to the regular CDPlus case)

SX32Mk2 & SX32Pro *Internal* Expansion for the CD32

The SX32 Pro is now shipping!
Make your CD32 into a high powered, portable Amiga!
The SX32Pro and SX32Mk2 add ...

- 33 or 50MHz '030 MMU CPU and FPU socket (33Mhz FPU socket only on the SX32Mk2)
- Simm socket for up to 64MB of 32 bit fast (60/70ns) RAM (up to 8MB fast (70ns) RAM on the SX32Mk2)
- Buffered IDE interface for internal 2.5" hard drive ***and*** second hard drive, SyQuest, Jaz *or even 8 speed CDROM* (optional extra on the SX32 Mk2)
- Sockets for RGB video (23 pin), VGA video (15 pin), Parallel port (25 pin), Serial port (25 pin), Floppy disk port (23 pin)
- Jumper-selectable for PC or Amiga keyboard input (external adapter on SX32Mk2)

... to the CD32's existing mouse, joystick, keyboard, audio, RF, composite video and SVHS ports.

SX32Mk2 - *sale price* - *£189.95*
SX32Pro-50 - *sale price* - *£349.95*
Genuine Amiga 89-key compact keyboard *£34.95*
SX32 floppy, hard drives 20MB-1.1GB, RAM - *Please ring*

What do the reviewers say?

Amiga User Int'l	*"95% - Definitely Recommended"*
Amiga Computing	*"90% - A Dream to Use." Blue Chip Award*
Amiga Format	*"96% - Absolutely Top Notch" Gold Award*



The SX32Pro

All models include full pictorial fitting instructions,WB3.0 & utilities on CD and 'Click-and-Go' hard drive installation diskette

WOA Show Special Limited Quantity - SX33Pro-33SE. A Special Edition SX32 Pro with 33Mhz '030EC processor (no MMU) - *Just £299.95*

AMIGA HEALTH WARNING

If you have recently fitted - or intend to fit - an IDE/ATAPI CDROM to your A1200 *(other than an Eyetech CDPlus unit)* **without** a buffered interface then your Amiga is in risk of serious damage arising in the future. The A1200 - unlike A4000's and PC's - has *NO* internal IDE buffering. On the A1200 the IDE interface connects ***directly*** to the A1200 processor chip which itself has insufficient output to drive more than one IDE/ATAPI device (and only then on a short data cable) for any sustained time period. To the best of our knowledge the ***Eyetech CDPlus*** is the only A1200 ATAPI CDROM supplied with a buffered interface as standard. We are now making this 4-device buffered interface available separately for use with other kits and D-I-Y CDROM installations. At only £39.95 it is a small price to pay to preserve your Amiga's health.

Mk2 interface now available - Compatible with all popular hard drives and accelerators - including '060 models

FOR YOUR A1200 TOWER CONVERSION

- Full tower case with mountings for A1200 motherboard & PCMCIA accessories with 250W PSU, A1200 psu connector, 10 (total) CD/HD/Zip/floppy bays and provision for fitting a standard PC motherboard as well! £119.95
- PC or A2000 A1200 keyboard adapter - no soldering or shield removal needed. £34.95
- Full-sized A2000 keyboards for tower conversions etc (needs A1200 keyboard interface) £49.95
- Replacement A1200 internal floppy drive mechanism with faceplate and interface for tower mounting £44.95
- Internal floppy drive extension ribbon cables (60 cm)to mount your internal drive in the full tower floppy drive bay £12.95
- External floppy drive (23m-23f) extension cables for external floppy drive to minitower/desktop floppy drive bay (60cm) £14.95
- Rewirable IEC plug for PC tower, PSU etc AC mains outletto power your own monitor/TV £6.95



(*optional extras)

If you can use a screwdriver this could be your system!

EYETECH's ONE-STOP INTERNET SHOP

S U R F C I T Y

Internet packs

- ***3 months unlimited local call access internet usage***, Internert reference book and full (but restricted usage) Internet software (TCP/IP, WWW, FTP, Email, Telnet, Term and IRC) £39.95
- Upgrade to full unrestricted software - ***any ISP, Full TCP stack, IRC, FTP, Term, Mail, WWW browser with frames, Telnet, etc*** £44.95

Modems

- 14.4 modem & psu £29.95
- 28.8modem, cables £69.95
- 33.6 modem, cables £89.95

Data & phone cables

- Modem cable (2m) £5.95
- 10m, 2way phone ext'n £12.95
- 1m modem lead FCC68-4/6 to UK BT phone plug £5.95

Amiga Drivers for Epson Printers and Scanners

Scanned



printed output

EnPrint for the Stylus ColourII/IIs/Pro/ProXL/200/500/600/800/820/1500

- Unbelievable photographic quality output
- 'Preferences' & stand-alone printing program

ScanQuix3 for all Epson scanners

- 24 bit scanning with full range of editing options
- 'Scan-to-disk' option in Jpeg or IFF formats
- Stand-alone use or integrates with your Art package (Photogenics, ImageFX, AdPro, XiPaint, Pagestream 3, DPaint5, ArtEffect, PPaint)
- ***Also available for HP, Mustek (Paragon) and Artec scanners***

EnPrint v2.1.3 - only £29.95
ScanQuix v3.0 - only £79.95

The Amazing Iomega *IDE* Zip Drive

Another first from Eyetech

- *Can be used in place of - or as well as* - the internal hard drive*
- *Use a different bootable cartridge for each application or family member*
- *Ideal for transferring multimedia data between Amigas and/or other platforms*
- ***Fits in any Amiga/desktop/minitower floppy drive bay or in external case***
- *The ideal way to backup your data*



The IDE Zip drive fitted in an A1200

Bare IDE Zip drive *(inc Eyetech ZipPrep tools)* **- Just £119.95**

100MB Zip cartridges just £14.95/1 or £39.95/3 (*A600/1200 buffered interface needed)

D-I-Y and Bargain Corner

Hard-to-find parts for your Amiga project

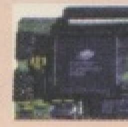
rd drive cables and cases

"-2.5" 44-way hard drive cables for A600 & A1200	£9.95
" 3x44-way hard drive cables for 2 x 2.5" drives (6cm+6cm)	£14.95
" power & data cables for A600 & A1200	£14.95
" full fitting kit for A600 & A1200 (contains ***everything***)	£24.95
" external hard drive case	£19.95
" removeable drive deluxe external HD case	£29.95
40-way IDE cable for 3.5" HD/CDROM ~85cm/2' 9"	£9.95
stom 3 x 40 IDE cables to 1.5m/5' (enclose drawing)	£19.95
" hard drive to 5.25" bay mounting adapters	£6.95
" hard drive to 3.5" bay with 3.5" data/power cable adapters	£12.95
" floppy/SyQuest/Zip drive to 5.25" bay mounting adapters	£6.95
pin m-f detachable data cable forexternal 3.5" HD/CDROM's	£12.95
nline external floppy/IDE SyQuest/IDE ZIP/IDE Jaz case	£12.95
ROM cables, cases and interfaces	
/ATAPI CDROM case with 40w PSU, audio & data connect's	£59.95
evice buffered EIDE interface for A1200/A600	£39.95
evice EIDE interface for A4000	£29.95
SI cable 25way 'D'(m)to 50way 'Centronics' (m) (1m)	£9.95
dio & video cables and adapters	
mm stereo jack plug to 2 x phono plugs for CDROM	£6.95
ROM standard 4 pin inverted T audio connector & phono plugs	£9.95
no plug x 2 to phono plug/socket x 2 audio mixer leads	£6.95
phono socket to phono plug mixer adapters (Gold **£3.50**)	£2.50
reo 2 x phono plug to 2 x phono plug 1.1m/4' (4.8m/16' **£9.95**)	£4.95
wer supplies and PC towers//desktops with integral psus	
anced metal cased PSU for A600/A1200/CD32/CDROM/ external HD (fit your old lead - instructions provided)	£39.95
W Ready-to-Go A500/600/1200 psu w/ Amiga, mains cables	£59.95
-tower or desktop case with 200W/230W PSU, CD & HD/Zip bay, power connector block, resistor, cable restraint etc, & full instr'ns	£49.95
n M-F extension cable from PSU to external HD/CD 0.9m/3'	£9.95
in m floppy drive connector to 4 pin HD/CDROM power plug	£9.95
00 internal cooling fan - dissipate that extra power!	£14.95
23-15 pin adapter for A500/600/1200 (most monitors)	£12.95
23-15 pin buffered VGA adapter (all Amigas/monitors)	£24.95
2+ board - use PC cards in big-box Amigas	£129.95
eUp 1 to 2MB Chip RAMupgrade for A500/A1500/A2000's	£99.95
00 keyboards (new) for A2000/3000/4000* (*adapter +£5)	£49.95
Hz capable PGA FPU for SX32Pro-50 or accelerators	£59.95
omaster PCMCIA concurrent sound+25fps video digitiser	£69.95
00 Workbench 3.0 disks (5) with WB3.0 & user manuals	£19.95

Two-and-a-half new A1200 Expansion Products from Eyetech

PortPlus **- high speed serial and parallel port expansion**

- *2 x* ***460Kbaud*** *buffered serial ports with low CPU overhead*
- *PC & Amiga compatible parallel port transferring up to* ***500K bytes/sec***
- *Optional high speed PC-Amiga & Amiga-Amiga* ***networking software***
- ***Leaves PCMCIA & trapdoor free*** *; accelerator friendly & very easy to fit*

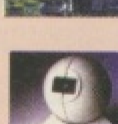


PortPlus - just £99.95!

New! *PortJnr*- 1 high speed serial port - *just £49.95*

***Quickcam* for the Amiga**

- *Use a low cost* ***PC Quickcam*** *to capture IFF images on your Amiga*
- ***Fully multitasking*** *- including window resizing even whilst digitising*
- *Compatible with* ***all Amigas*** *with standard Amiga printer port & WB1.3+*

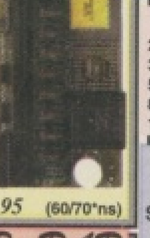


Quickcam* hardware adapter and software - *only £39.95!

Apollo Accelerators - Unbeatable pricing

Entry level A1200 Accelerators - Unbelievable value

25MHz '030 with MMU & FPU.	(5 Mips)	- *Just £79.95*
33MHz '030EC with FPU.	(7 Mips)	- *Just £89.95*
Power User A1200 '040/'060 accelerators (no tower req'd)		
25MHz '040 with MMU & FPU.	(19 Mips)	- *Only £189.95*
33MHz '040 with MMU & FPU.	(25 Mips)	- *Only £229.95*
40MHz '040 with MMU & FPU.	(30 Mips)	- *Only £259.95*
50MHz '060 with MMU & FPU.	(40 Mips)	- *Only £439.95*



A Standard A1200 is rated at 1.3 Mips. All measurements from Sysinfo
>>Special memory pricing with accelerator purchases<<
4MB - £19.95; 8MB - £39.95; 16MB - £69.95; 32MB - £149.95* (60/70*ns)

This Months Sale Specials

Data/fax modems with psu	
- V32 14.4Kbps data, 9.6/14.4 fax	£29.95
- V34 28.8Kbps data, 14.4 fax	£69.95
- V34+ 36.6Kbps data, 14.4 fax	£89.95
ISDN adapter - ZorroII for big-box	£159.95
20- pin Zip RAM 4x1Mbit chips 60ns for A3000, Octogon, '386 board etc	£9.95
A1200 RAM boards (clock, FPU skt)	£34.95
SCSI ext Zip drives w/PSU (no cart)	£129.95
Slim external floppy drives	£34.95
Stereo speakers (pair), amp & psu	£14.95
Metal CDROM case (no psu)	£5.95
Amiga microswitched mouse	£9.95
Amiga CDROM disks - our sel'n - 4 for	£10.00

Cocktel - from ProDAD

At Last - Professional Colour and Sound Videoconferencing - for all '030+ Amigas with HD & 6MB

- *Works with most Amiga sound & video digitisers (ProGrab, Vlab, Technosound etc)*
- *Works with 28.8 modems, ISDN etc*
- *Simultaneous text, video, audio & file tranfer*
- ***Ring/write for further details***

Full Cocktel software - £99.95
High quality colour conferencing camera - only £159.95

A1200 *InstantDrive* Hard Disk Kits

***InstantDrives* are *only* available from Eyetech**



"The fastest drive I have tested on any platform ...95%"
- David Taylor - Amiga Format February 1997

Important Note! 3.5" hard drives - even those described as *'Slim'* - are usually 1"/25mm high and ***will not*** fit in an A1200 without significant modifications to the case and metal shielding - which itself reduces the value of your computer. All ***InstantDrives*** from Eyetech are less than 20mm high and fit perfectly.

- Rated ***99%*** - AUI November 1996, ***95%*** - Amiga Format February 1997
- No hole drilling, case clipping, or shield removal required
- All drives are brand new with a 2 year warranty and come Inclusive of full fitting kit and easy-to-follow pictorial instructions
- Ready-to-use with WB3.0 and over 45 top quality utilities installed and configured to the Toolsdaemon menu system.
- AV drives come with a fully licenced version of Optonica's MMe multimedia authoring software ***AND*** internet access software (shareware) preinstalled

2.1 GB AV £229.95 2.5 GB AV (~3MB/s) - £239.95

2.5" InstantDrives for the A600, A1200, SX32 & SX32 Pro

21MB	Ideal for users of mainly CDROM software on the CDPlus and SX32	£34.95
344MB	A 2.5" drive ideal for the SX32Mk2 and for the A1200/A600	£129.95
540MB	A fast, superslim drive with ample capacity for most users	£149.95
810MB	A superb, superslim drive ideal for users of serious applications	£189.95
1.08GB	This top-of-the-range superslim drive is perfect for the SX32Pro	£229.95

Eyetech Group Ltd
The Old Bank, 12 West Green, Stokesley, N Yorks, TS9 5BB, UK

Tel UK: 07000 4 AMIGA
01642 713 185
Tel Int'l: +44 1642 713 185
Fax: +44 1642 713 634
eyetech@cix.compulink.co.uk
http://www.eyetech.co.uk/~eyetech

Voted AUI Amiga Company of the Year 1996/7

EYETECH

Next Day delivery to EC and USA/Canada. Worldwide deliveries in 2-7 days from receipt of faxed order and payment details. (eg SX32 next day to NYC £25.30)
UK m'land 2/next day insured del'y charges: S/w, cables, buffered i/f £2.50/£3; 2.5" drives, accelerators, mem boards £6/£7; 3.5" drives, modems, psu's £8/£10; CDPlus £10/£12
Ring/fax/email for other delivery costs

UK bank/building society cheques, Visa*, Mastercard*, Switch, Delta, Connect, Postal/Money orders accepted. * A 3% surcharge is applicable to all credit card orders.
Due to space limitations some of the specs given are indicitive only - please ring/write for further details. Please check prices, specs and availability before ordering. If ordering by post please include a contact phone no. Goods are not supplied on a trial basis. E&OE.
All prices include VAT at 17.5%.
VAT is not applicable to non-EC orders

Reader Survey Results

You filled in the forms, we fed them into a big computer, and this is what came out of the other end.

Most copies of the January 1997 issue of CU Amiga Magazine came with a reader survey form tucked into the pages. To help us get a better picture of you, we asked you to fill it in and post it back to us. By way of an incentive, we also offered a Psion Sienna palmtop computer to one lucky respondant, picked at random from all the entries. That lucky reader was one M Bennets from Coventry. We'd like to thank everyone who took the time to put pen to paper. The information you've given us has been extremely interesting and useful. Right then, on with the results.

You, the CU Amiga readership

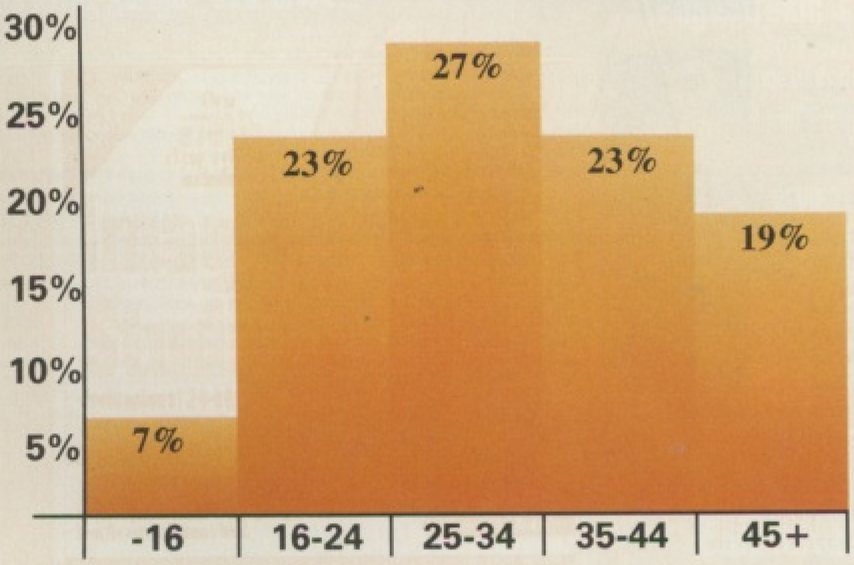
Let's start with a look at you, the reader. Many of those outside the Amiga scene have a preconception that our readers are all teenage boys. This myth is shattered by the response that shows a typical CU Amiga reader could be aged just about anywhere from school kid to pensioner. There's vitually no peak in the age range at all: 92% of our readers are evenly spread from 16 to 45+.

As for sex, the results were not too surprising: 96% male, 3% female, and 1% apparently going through "one of those phases".

We asked how much time you spend on your Amiga each week. Responses for this were quite varied, ranging from 10% who are on their Amigas for 5 hours or less, ramping up smoothly through to 17% clocking up 21-30 hours, then back down a little for the 15% who spend more than 31 hours a week with their Amiga. The conclusion? Die hards, no question about it!

How long have you been at it? 66% have been with the Amiga for 4 years or more. Half of those have enjoyed the Amiga for 6 years or more. Newcomers, Amiga owners for 2 years or less, make up 15%. The average length of Amiga ownership came in just under 5 years.

Age of CU Amiga readership



▲ Despite a slight peak in the 25-34 range, CU Amiga Magazine is read by adults of all ages, with a fairly small contingent of under 16s.

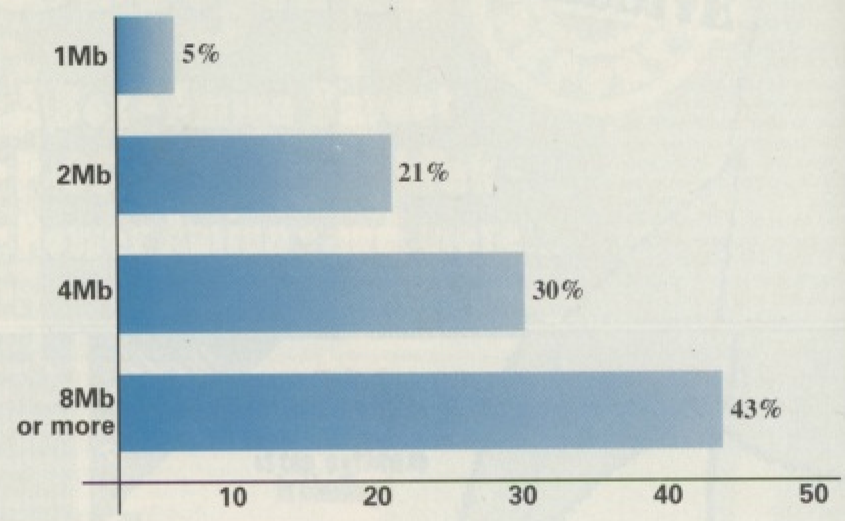
Your Amiga

So enough about you, what about your Amigas? A stonking 80% of you are A1200 owners. The good old 1.3 A500 was the next most popular machine with 15% of the vote. Almost level pegging were the CD32, A500 Plus and A600 with 12%, 11% and 10% respectively, while the 'big box' Amigas only scraped together 8% when combined. Mathematicians will notice that these scores add up to 136, making an average of 1.36 Amigas owned by the typical respondant. Alternatively, 36% of you own a second Amiga (assuming no-one has more than 2, which is probably not true).

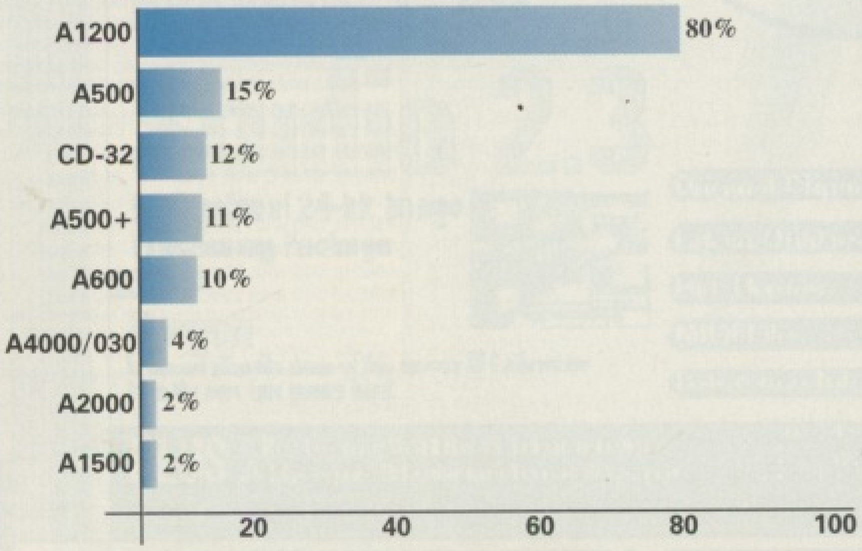
Another popular misconception is that there are loads of Amiga owners running on 1 or 2Mb systems. When quizzed about RAM capacity, a heartening 43% reported 8Mb or more, while 30% ticked the 4Mb box. This should have been marked 4Mb or more, and we'll assume it was, which would make 6Mb a probable popular RAM size. 21% are still getting by on 2Mb, with the 1Mb brigade bring up the rear with 5%.

Next we wanted to know what peripherals your Amiga is blessed with. Once again we were pleased to see 81% of you have hard drives, 85% have a printer, 57% have a monitor, 51% have a CD-ROM drive and 48% have an accelerator. The next most significant add-on was a sound sampler coming in at 27%.

Total RAM capacity



Amiga models owned



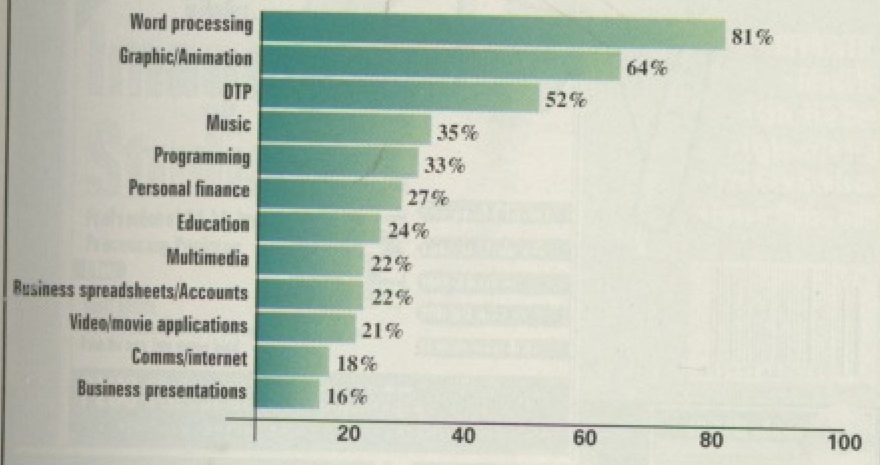
Amiga usage

So what exactly do you do with your Amiga? Almost everyone owned up to a bit of word processing, 81% of you in fact. The ever-popular graphics/animation area scored a slightly lower than expected 64%, not as high as might be expected considering the sampled issue had Imagine 4.0 as the main cover mount. Next, DTP pulled in a respectable 52% score. Music and programming were next up, with 35% and 33% respectively. Another significant area was that of 'office' type applications such as spreadsheets, personal finances and business presentations. Multimedia scored 22% and video got 21%, which if lumped into one category would rate as one of the most popular uses, although many respondants may have ticked both boxes.

There was a separate question to ascertain game playing habits. It seems most readers are occasional gamers to various degrees, with half reporting that games account for between 25% and 75% of their Amiga time. Non-gamers got a bit lost in the 0-25% category, so that's not told us much, but we do know that only 6% see games as the major use for their Amiga.

As for the types of games that are most popular, adventures top the chart, with shoot 'em ups, puzzlers and racing games all level pegging in second place, closely followed by RPGs. Less popular were platform, sport, arcade conversions (when was the last time we saw one of those?) and beat 'em up genres.

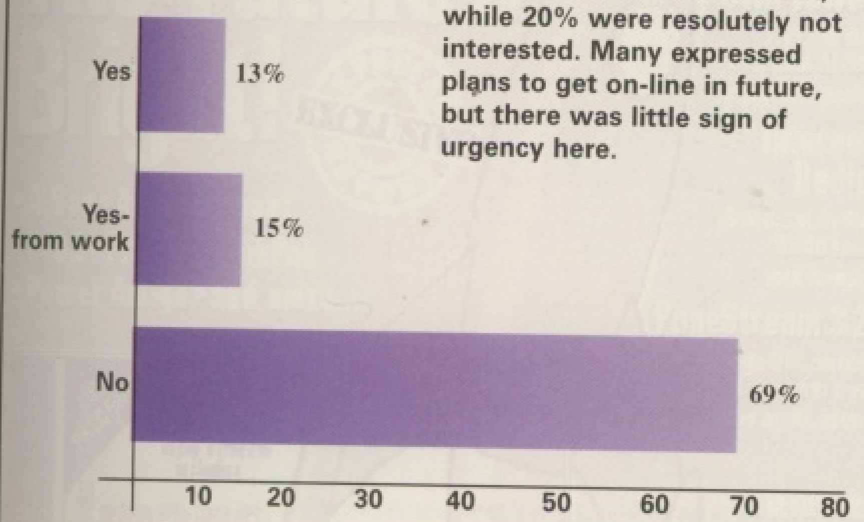
'Serious' applications



Net surfers?

To get an idea of how many readers are connected to the Internet, we asked them (cunning plan, eh?). The response came back as 13% with access from home and a further 15% who surf from work. 69% noted no Internet access. However, it's our opinion that many dedicated net users would be unlikely to fill in a large questionaire such as this and send it by 'snail mail', so the actual figure of netted up readers may well be higher. When asked "if not, why not?", 85% cited either the cost of access or the expense of getting up and running with an Internet system and account. 21% were unsure what benefits the Internet could offer them, while 20% were resolutely not interested. Many expressed plans to get on-line in future, but there was little sign of urgency here.

Internet access



What about us?

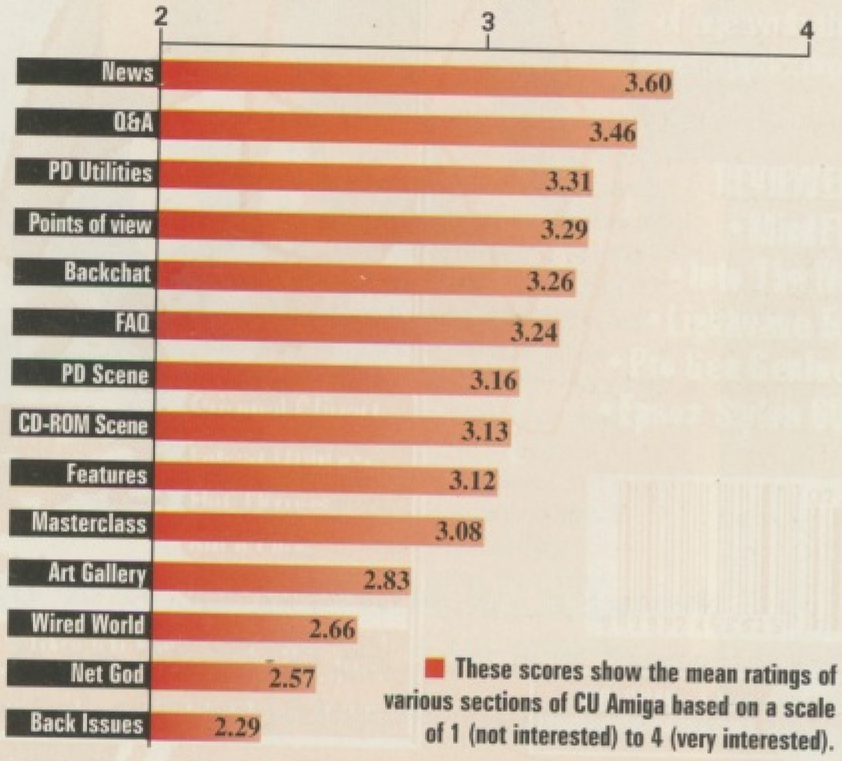
It was interesting to see how many bought that particular magazine on the strength of the cover, software or repuation alone. 56% of those who bought CU Amiga 'over the counter' didn't feel the need to look through the magazine at all before parting with the cash. However, of those who did want to survey the goods first, 70% looked at the contents page before buying, while the news, features and 'technical' reviews were also well thumbed in the newsagents.

We also asked you to rate four aspects of CU Amiga as excellent, very good, good, fair or poor. 'General quality of writing' was rated as either excellent or very good by 74%. Similar scores were registered for 'General quality of pictures', 'General look of magazine pages' and 'Style of front cover'. A bit of cross-referencing shows that most of the more enthusiastic marks in this section came from younger readers.

When asked to rate individual sections and articles in the magazine, those sections that applied to all readers were rated highest, as expected (see chart below). Specifically news and Q&A were of great interest to many, but the biggest crowd puller was the Imagine 4.0 feature (oh, and the program itself no doubt), left off this chart for the sake of clarity. Opinion of the rest of the contents varied depending on the particular interests of each reader.

To sum up your opinion of CU Amiga we asked for three words which best describe the magazine, to be picked from a list of 24 that included a range of positive and negative attributes. Way out in front were the top three of 'informative', 'friendly' and 'interesting', each scoring between 72% and 78%. At the bottom end of the scale were 'biased', 'confusing' and 'juvenile', which we were glad only managed around 3-4% each.

Rating of magazine sections



And finally...

The survey also revealed a number of other factual nuggets of rather less relevance. For example, 3% said they would like to see more coverage of food in CU Amiga, 20% are interested in animals, 23% wear Levi jeans, and the average weekly lager consumption is 4.36 pints.

What this survey shows is that there really isn't such a thing as a typical CU Amiga reader, something we have been aware of for some time. The only generalisations that could be made would be that most CU Amiga readers are male, own an Amiga, and use their Amigas for word processing. However, we've learned a great deal from your responses, and all the information we've gathered will help us fine tune your favourite Amiga further still. Thanks.



The Amiga CD-R Evolution

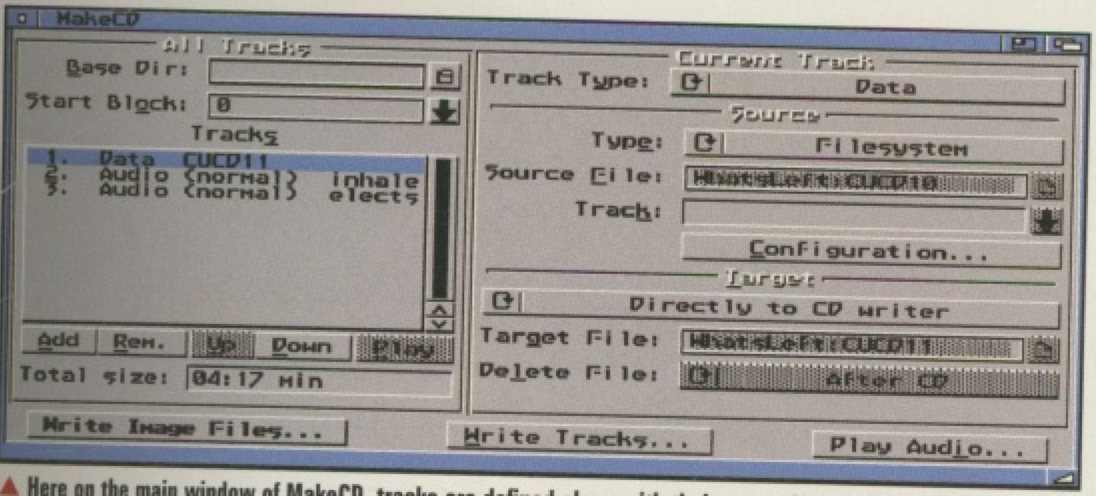
Ever thought of starting up your own CD company? It's not as difficult as it might appear. It's also feasible to go into commercial CD mastering from your own home and, more importantly, from your own Amiga.

It seems like yesterday that CD-ROM was a big thing. I remember getting excited about the CD format and splashed out an awful lot of money for a CD player and a copy of Dire Straits' Brothers in Arms. Nowadays a computer is hardly sold without an 8 speed CD-ROM built-in, and magazines come with 600Mb of data sticky taped to the cover. The format has so long been regarded as something you had to buy, rather than record yourself, that the fact you can roll your own has taken some getting used to. It was always too expensive anyway, until now.

Only last year, a CD Recordable or CD-R deck cost over £500 and blank CDs were £10 each. On the Amiga, things were even more ropey, with AsimWare's expensive MasterISO as the only software option, (in)complete with its support for a limited number of CD-R drives. Lately things have improved no end with the price of CD-R decks plummeting, excellent new Amiga software and the cost of blank media also falling. Previously, writing CDs was thought to be a specialist application. This is a myth we'll seek to dispel here as we point out the advantages of CD-R and how to do it on the Amiga.

Why CD-R?

Is it worthwhile spending this much money on a CD cutter? It depends on the applications of course. At the minimum, CD-R is definitely the cheapest random-access storage around. That means it's cheaper than Zip disks, floppies and of course hard drives. Tape backup can be cheaper but the data can only be read off sequentially and of course, it's only good on tape drives, not CD-ROM mechanisms, more common than Del Boy's accent. OK so it's cheap massive storage but it has



▲ Here on the main window of MakeCD, tracks are defined along with their types. Also selected is where the tracks are to go; to temporary files or directly to the CD writer.

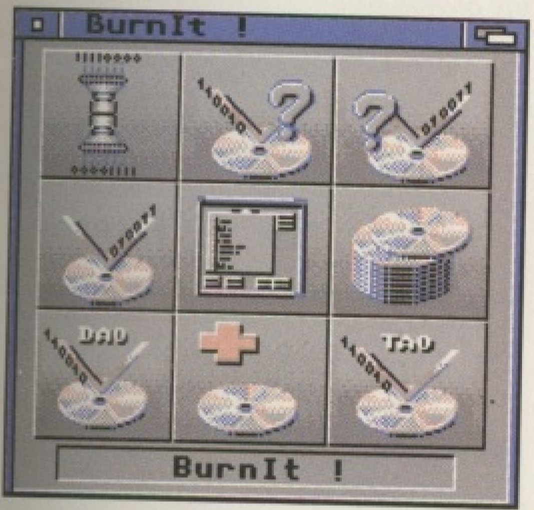
some drawbacks; it can only be written once and writing CD-Rs is time critical.

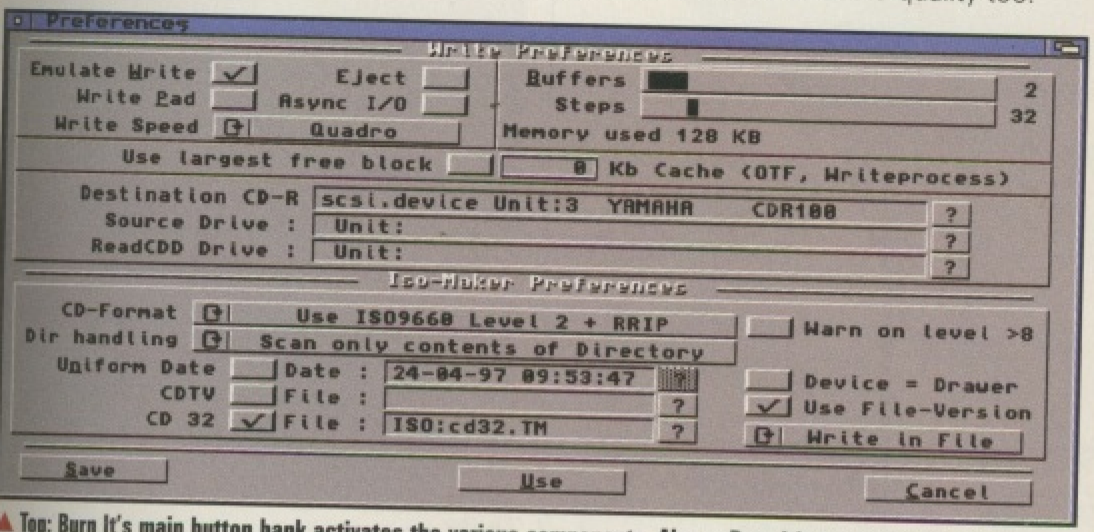
The obvious application for CD-R is the backup, but in reality, Amigans rarely have need of such a device purely for backups. Most likely you'd be using a CD-R for something else and backing up is just another useful application of a CD-R drive connected to an Amiga. So, the major use is going to be actually making CDs for other people. They may contain data, music or a mixture of both. CDs can be read by virtually any machine so right from your Amiga, you could make a commercial CD-ROM for use on a Mac, PC, Amiga or all three, which has indeed been done before. Doing that obviously increasing your potential market too.

Compiling freely redistributable software and pressing a CD full of this could then be passed to commercial duplicators. They would then make a Glass Master (costing around £400) and be able to press silver CDs from there at a cost of around 30 pence each (depending on quantity). Feel free to do the maths and figure out if it's time to start up that CD company. There's good merit to this idea; exactly what you may put on a CD is up to you but it's easily feasible to go into commercial CD mastering from your own home and more importantly, your Amiga.

Making music

The next application must be music. The Amiga's audio is sadly inferior to CD-quality 44Khz 16-bit audio and you can't fit an Amiga in your back pocket or mail it to a record producer. Armed with a copy of OctaMED SoundStudio from the March issue of CU Amiga, an Amiga can generate the highest quality music straight to hard drive. That can be directly cut onto CD to use as a demo, commercial record master or even your own personal listening. Copying tracks off other CDs onto a new CD-R is easily done. If you want proof of this in action, have a listen to the two audio tracks on this month's cover CD. Both were produced using Amigas and mastered onto a CD-R with an Amiga. You can have that kind of audio quality too.





▲ Top: Burn It's main button bank activates the various components. Above: Burn It's general preferences sporting an impressive array of settings for the CD-R writer and the type of ISO volume created.

Cutting CDs

The business of using CD-R cutters on Amigas isn't hard. In fact in many ways it's superior to doing it on a PC with their pitiful multitasking and hideously expensive software. However, it's not a trivial undertaking and requires some understanding of what's involved and a base level of performance to ensure reliability. Firstly, IDE CD-R decks are only just appearing and as yet they are totally untested on Amigas. For the moment you will require a SCSI interface to use a CD-R. It's likely that a SCSI interface will always be the best way of using a CD-R at any rate since the A600/1200/4000's IDE interface isn't fantastic anyway.

The critical factor on driving a CD-R recorder is that they must be fed data at their recording rate with no significant interruptions in the flow. That means the writing process must constantly be supplied with data from the part of the system that's reading the source from the hard drive. It also means you can't multitask your Amiga to your liking since this may take away valuable CPU resources from the CD writing process and the

ISO 9660 options

It's generally known that ISO 9660 is the standard for CDs but what kind of standard is it? It's a filing system just like OFS and FFS are on the Amiga. The standard isn't anywhere near as complex as the Amiga's filing system – standard ISO 9660 level I only handles PC style 8.3 filenames. Not much use. Fortunately, ISO 9660 level II supports 31 characters but they can only be uppercase alpha numeric or an underscore. Not much of an improvement.

So there's the RockRidge extensions which give full files with all possible ASCII characters inside. Great news but sadly the original Commodore CDFS doesn't support this so we must use the ISO 9660 standard and break the 'rules' to include full Amiga filenames. It's a shame that so many Amiga users still use the ancient buggy Commodore CDFS as it imposes certain restrictions like not being able to record special Amiga attributes in RockRidge and so on. When we mastered CUCD10 with RockRidge, one aspect of this broke the Commodore CD filing system and so we needed to mail out hundreds of CDs using the old format. Isn't it time that you updated to AmiCDFS? You can find a full installer on this month's CD-ROM.

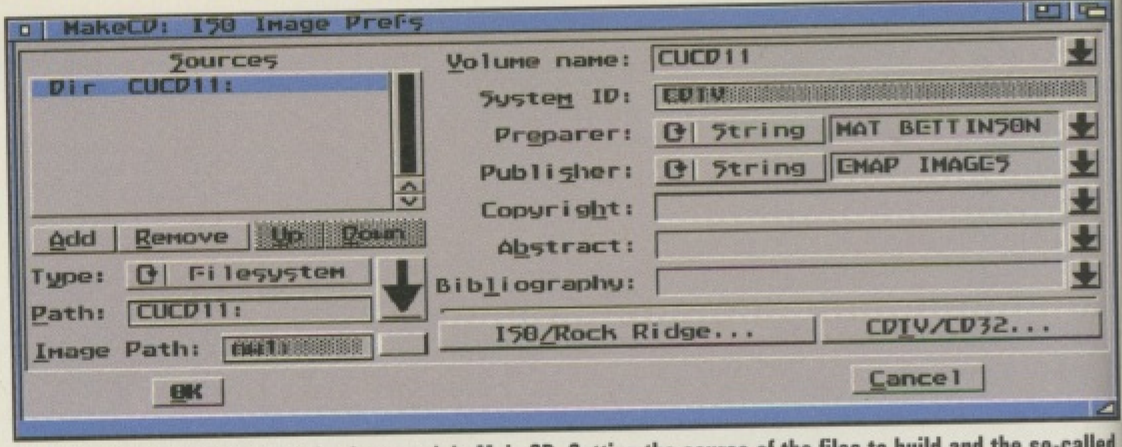
ILLUSTRATION: Anthony Collins

dreaded 'buffer-underrun' will result. This will render the CD-R disc useless for that track and so is a waste of a fiver at the current cost of CD-R media. Ouch.

DMA SCSI

Fortunately CD-R drives have test modes, fantastic for making sure you have the configuration tweaked right so that everything goes without a hitch – once the cutting laser is turned on the point of no return has begun. Firstly, a stock A1200 with an internal hard drive and a Squirrel interface is unlikely to have the necessary throughput to drive a CD-R. The Squirrel itself consumes a good deal of CPU horsepower during SCSI activity as it is but when the IDE controller tries to do the same, we're asking for trouble. A DMA SCSI controller attached to a CPU accelerator will be just the trick, providing extra CPU power and fast SCSI to take care of the writer.

On a big-box Amiga, things may be less critical. In this case, reading from an IDE drive and writing to a SCSI CD-R via a Zorro 2 controller such as an Octagon, even though it's not DMA, is most likely to succeed. Obviously the performance of your system needs to be doubled if you're splashing out on a flash 4 speed cutter. The big mistake people make is doing raw speed tests from their controllers. You might get a figure of 2Mb/s off a hard drive and the maths say a 2 speed cutter requires only 300K/s to succeed. It's not that simple, it's about interruptions and not about raw speed.



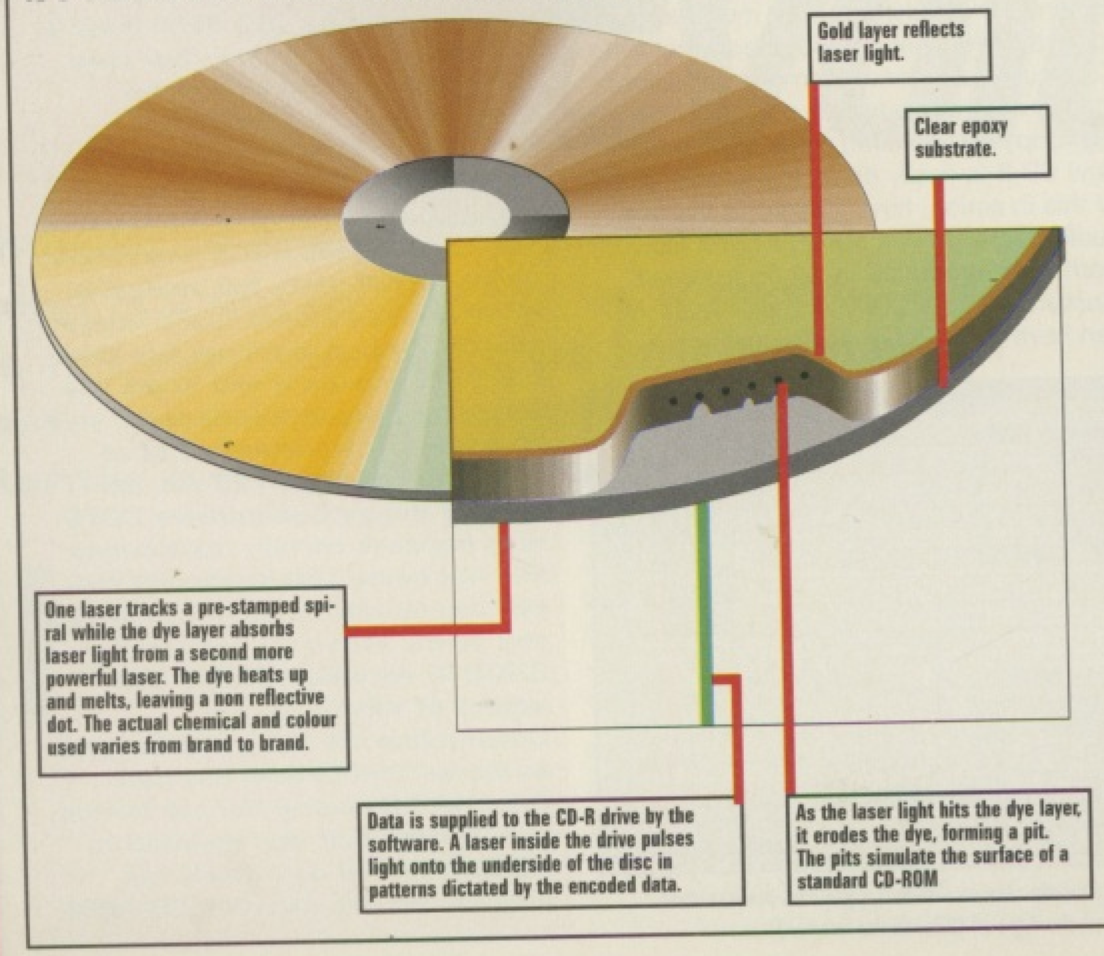
▲ The source preference for the data track in MakeCD. Setting the source of the files to build and the so-called 'Primary Volume Descriptor' where things like the preparer and publisher and the volume name are set.

CD-R and how it works

The basic principal of CD-R is as follows... A blank CD-R disc has a spiral pre-stamped into the media. When writing, an initial laser tracks this groove so that the laser behind it can write the data. This is rather critical, to say the least, which is why the faster cutter you can get for less than the price of a new house, writes at only 4 speed. Most write at 2.

The data is written by the second, larger laser switching on and off to write the pits and dots. The entire CD-R disc is coated in a chemical which changes its reflectivity after being heated by the laser. There are several chemical formulations used in CD-R disks which are most noticeable by the colour. Some are a pure gold giving rise to the nickname for CD-R disks as 'gold disks'. Others are green or even blue. They function in the same way though some work better than others in certain brands of CD-R writer. We found a couple of brands which cut OK but virtually every CD-ROM drive had trouble in reading.

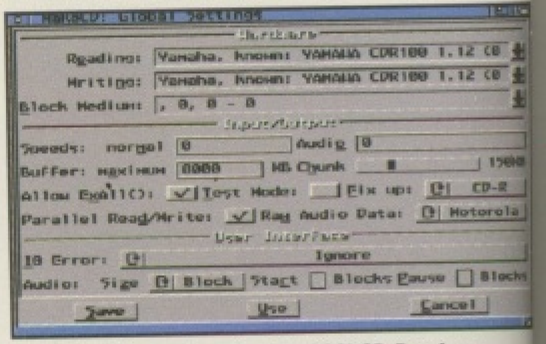
This is another important issue; all CD-ROM drives should be able to read any kind of CD-R disk but in reality this doesn't work out so neatly. Our advice is to stick with a reputable brand of CD-R media, safe in the knowledge that it works. Don't be surprised if Dad's CD player wont play audio from a CD-R – this is the most popular area of failure. Generally it's older CD drives which have problems with CD-R disks.



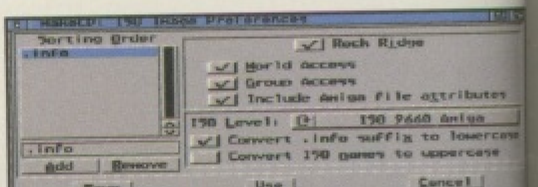
CD-R models

A top little CD-R which we can recommend is the Ricoh RS-1420. We recommend it for three reasons. Firstly, it's a got a lovely big 2Mb buffer which makes things less critical. 2Mb is over 6 seconds of CD writing so an interruption would have to be quite serious before it affected it. Secondly, MakeCD supports the drive directly and it's known to work perfectly with it. More about software later. Thirdly, the drive is extremely good value for money at £276 from Linefeed (tel: 0171 474 1765) and it's even available in an Amiga friendly external powered box for £350. It's by no means the best writer on the market but it's the right price and the healthy buffer makes it ideal.

The absolute best drives on the market by near universal agreement are Yamaha's range of 4 speed writers. These are known to have the fewest bugs in the firmware of all CD writers. Yes, unfortunately the standards are so complex that it's quite



▲ MakeCD's settings for the SCSI CD-R writer.



▲ ISO volume preferences. Spot the box unchecked which broke CUCD10 on the Commodore CD filesystem

common for CD writers to possess bugs in their firmware which must be worked around by the writing software. If software supports a writer, generally the authors have done this. The Yamahas are expensive but may well be worth it if you're looking to cut CDs more than infrequently. A full CD only takes 18 minutes to write as opposed to 37 minutes on a 2 speed unit. They do have less buffer plus a higher speed so demand extra system performance. I recommend this only for those with impressive Amiga hardware and fast SCSI.

The software

MasterISO: This is the grandaddy of commercial CD writing software, from Canadian CD specialists AsimWare, authors of the excellent AsimCDFS CD filing system. It's simple and a little expensive for amateur use but it's supremely reliable and is the most efficient CD cutting software available. There's virtually no ISO volume options to be had so it's geared specifically towards creating Amiga CD-ROMs. It doesn't directly support a range of CD-R decks, it's just known to work with a few such as the industry standard HP 4020/Philips CD2000, the Yamaha and a couple of others. It can't cut on the fly and has none of the bells and whistles that MakeCD does. It does exactly what is says on the tin: 100% reliably which is why it's been used by us to make CDs since CUCD2. MasterISO 2.0 is firmly in the development works, promised for some time next month. We'll take another look at it then.

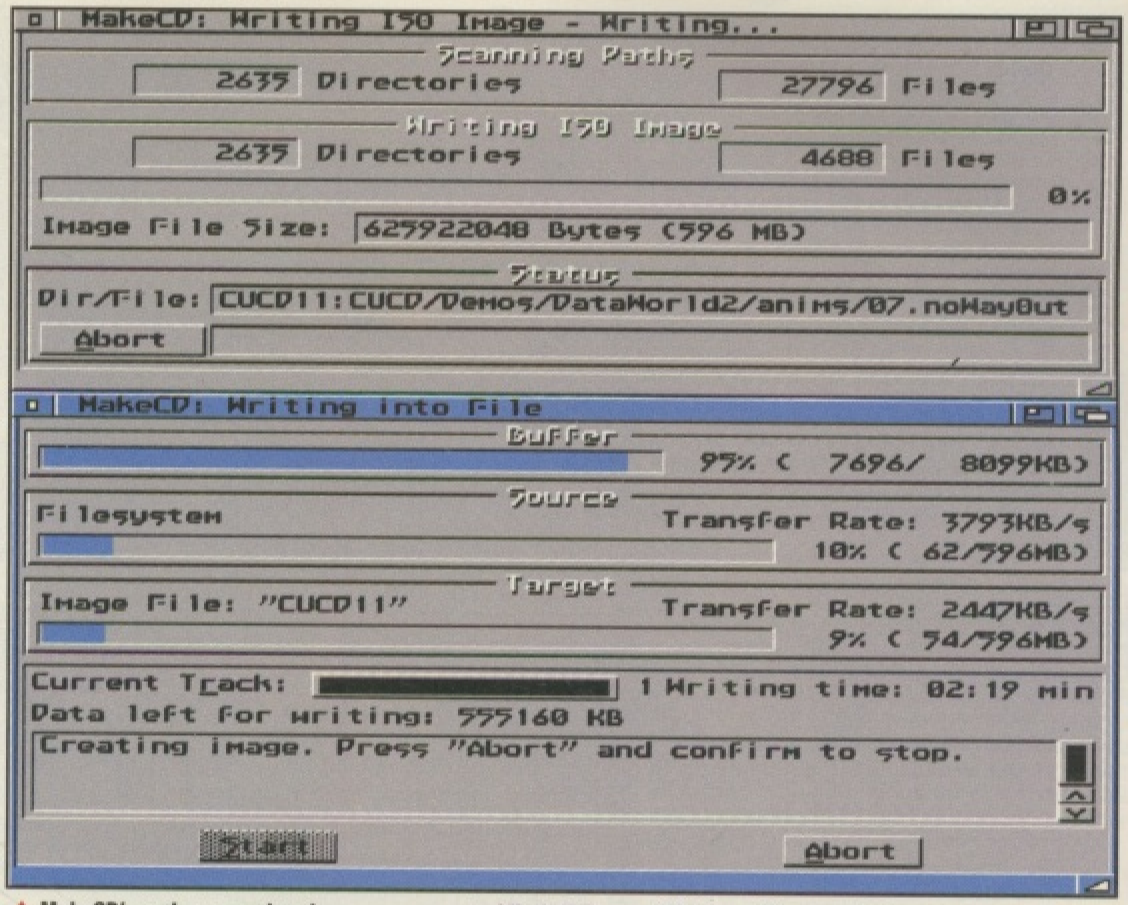
Burn It: A newcomer like MakeCD, Burn It is written by German programmers Michael Siegel and Axel Deising. Burn It's main claim to fame is that it handles Disk-At-Once (DAO) recording. This enables creating CDs without 2 second gaps between tracks just like you sometimes find on commercial audio CDs. It's also very useful for creating disks for commercial duplication. Burn It is an extremely well-featured CD writing package and we'll be taking a close look at it in the next issue of CU Amiga. Loaded with not only write capability but extensive reading functions, the documentation doesn't shy from mentioning the naughty practice of 'backing up' Playstation CDs. This package is certainly one to look out for if only for the DAO capability alone which is yet to be implemented on any other Amiga CD writing package. There's a no-write demo of Burn It on the CD but the full version is not cheap at £79 for the Track At Once and £119 for the Disk At Once versions.

Make CD: The CD writing package which everything else is going to be measured against given the current state of the package, awarded 92% in this issue. MakeCD has lots of options to alter the ISO image and it's also the only package which doesn't require generating of a temporary ISO file before cutting. This saves on time and hard drive space if your Amiga is quick enough to keep up with it. It can read and write multisession and Mode2 'XA' disks just like Burn It and is promising DAO capability soon. A superb package which at around £35 for amateur use is a total steal. Check out the review on page 63 and the demo on the cover CD-ROM before you go any further.

There you have it, top quality CD-R decks have come right down in price to an affordable level and the Amiga software is looking absolutely superb with even more in store for us later. With all this power now within your reach, it might be worth considering your very own CD-R after all, whether you want to make a few backups, set up shop as a software house or even start your own record label.

For more information, see this month's CD-ROM web section for just about everything you need to know about the CD-ROM standard.

Mat Bettinson



▲ **MakeCD's rather convoluted progress report while building an ISO image. The top window shows the file being placed in the volume, the lower shows the buffer, progress and transfer rate statistics. Hoo boy.**



Multisession

While you can only write to a CD-R once, it's not true that you can't record any more on it after that. We can use the so-called multisession capabilities of CD-R recorders. The first and most common application of this is PhotoCDs. Where a roll of film is taken in with a CD-R disk. The developers scan the photos and place in a session on the CD-R. This can be repeated until the CD-R is full. We can do this with data tracks also although only the AsimCDFS, CacheCDFS and AmiCDFS filing systems will mount the various multisession volumes.

You will also need a CD-ROM drive that is multisession compatible or you will need to use the CD-R deck to read them. MakeCD and Burn It have multisession support. Using them in this way increases the usefulness of CD-R recorders. You don't need to wait until you have a full CD worth of data before cutting a CD.

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Build Your Own Tower



PART 3

As our DIY guide to tower conversion draws to an end, we present you to the wonders of Zorro cards and introduce the easy option of commercial towers.

Welcome to the third and final part of our epic Build Your Own Tower feature. It has been a long road with more than a few pitfalls, but it is something that had to be done. Now that the Amiga finally has a home, the prospect of the technology being brought into the modern era looks good, but until such a time as Gateway/Amiga International have a new, upgraded, mid-market desktop machine for us all to rush out and spend our hard earned readies on, the only true path to Amiga nirvana is the way of the tower conversion.

Over the past two issues, we have covered the most basic but most universally useful advantages of tower systems. If you follow the guidelines for either the simple tower sidecar or the full tower conversion, then you will have a freedom of expansion that is simply not available to the Amiga user stuck with their 80's style keyboard console machines. The high capacity power supply means you never have to worry about the problems of using an accelerator and a hard drive – gasp of breath – *at the same time*. 44 pin to 40 pin converters on the IDE port enable the use of easily available hard drives, CD-ROMs, even Zip drives, all to be found at knock down prices from the cut-throat PC market. But there is more. This month we look at the ultimate expansion for your Amiga: Zorro slots.

Busboards

Traditionally Zorro slots have been the preserve of the big-box Amiga. Many Amiga users have only a vague notion of what they are about and why they might want them, but little known to most A1200 owners, there is already something not far off being a Zorro slot in your computer – the accelerator slot. German hardware manufacturers Micronik have for a little while now produced a Zorro busboard for the A1200 which plugs into the accelerator slot to allow you to use Zorro cards. These devices of course require a tower case to use.

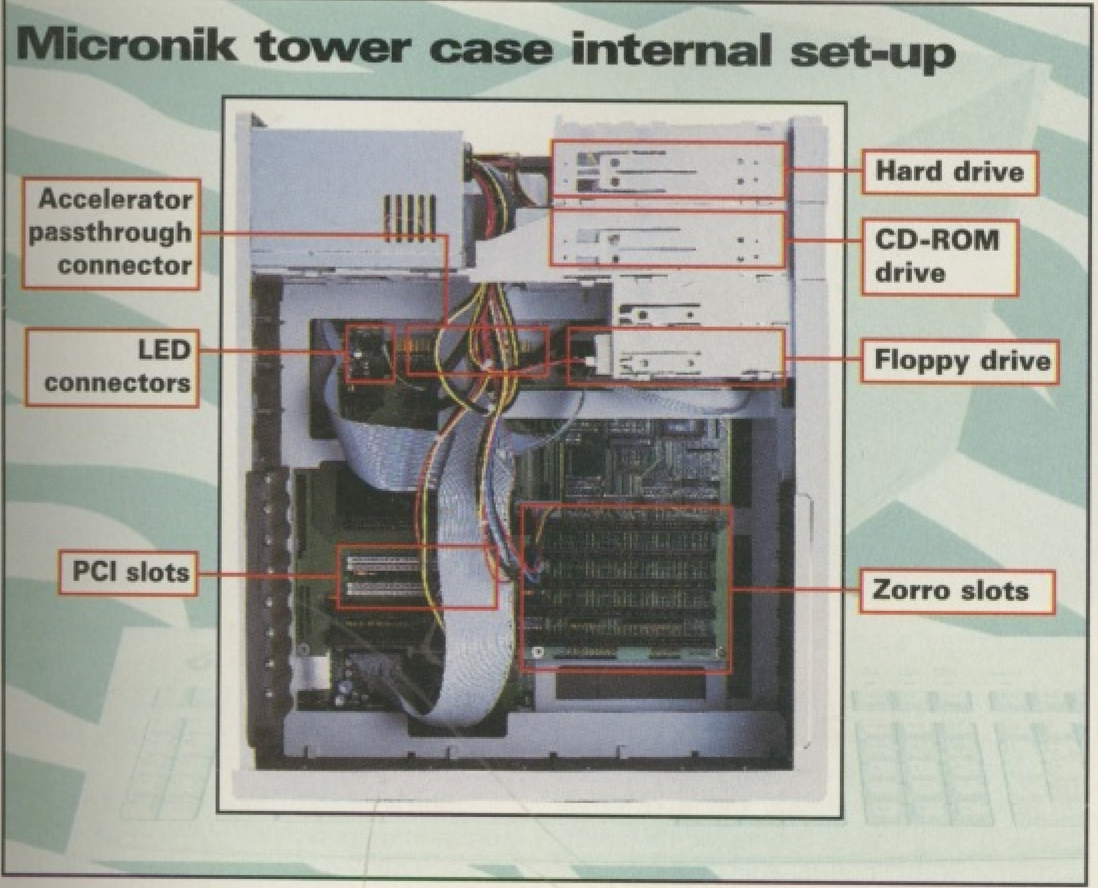
The Micronik busboard, distributed in this country by Blittersoft, currently costs 5p under £190. This is a fair whack of money, but is good value for what it does. We looked into the possibility of a DIY busboard, but it simply isn't practical. Not only would it be very hard to build, but the savings would be minimal. The Micronik board can be fitted to a DIY tower, but picking up the matching Micronik tower from Blittersoft makes life a lot easier.

A busboard and tower package costs £369.95. For this you get the tower case, an uprated power supply, a PCMCIA right angle converter, keyboard adapter, all the cabling necessary including 44 to 40 pin IDE cables, and of course the busboard with five Zorro slots, two ISA slots, two PCI slots and a video slot.

Amiga dedication

The Micronik tower case differs from any tower cases you might look at for DIY options in that it is designed with the Amiga motherboard in mind. When we dealt with DIY options last month, we showed you how to use ribbon connectors to extend the ports to the rear of the tower. A cheaper option would be to make a cutout in the back of the case which the motherboard sockets will pass through. Doing this with a hacksaw is a tricky task,

Micronik tower case internal set-up



Waiting for a busboard

What is a busboard anyway? A busboard adds data buses to your computer. These are communication links between your computer's CPU and a piece of add-on hardware. Although there are a variety of dedicated buses on the A1200 already, several of which have been sneakily used by hardware developers for their add-ons, the standard Amiga bus for add on cards is the Zorro slot. Big box Amigas come with a Zorro busboard, the low end models don't. Most major types of hardware expansion – graphics cards, sound cards and so on – need a fast connection such as the Zorro bus, and at the moment at least, if you want to expand your A1200 in this manner this is the only option. Turn the page to see what Zorro cards can offer you.



but this commercially produced tower does it for you. Inserting the motherboard into this tower is made simple by the ingenious cradle system Micronik have developed. A drawer slides out of the tower completely to accept the bare motherboard.

Preparing your motherboard for transplant involves a little more than we described last month for the DIY fitting. Because of the shape and size of this cradle, the motherboard has to be removed entirely from the metal shield which protects it inside the plastic A1200 case. Not a hard job, but time consuming and fiddly. If you look at the back of your computer, you will see that there are small hexposts on either side of all the sockets. These hexposts screw through the metal shield, and have to be unscrewed for the bottom half to be removed. The bare motherboard then slots into the plastic cradle, the sockets matching with the cutouts. We found that the registration of the holes isn't perfect and you can save yourself a lot of hassle by putting the hexposts back when the motherboard is in the cradle.

Keyboard adapter

Built into the cradle is a keyboard adapter which is the easiest to use of any we have come across. A ribbon connector plugs directly to the keyboard ribbon header of the motherboard – two seconds to fit. The adapter takes PC keyboards, a cheaper and better option than the alternative of spending silly money on a case to re-house your Amiga keyboard. The motherboard is then screwed down to the cradle, but be careful as the screws bite into the unfortunately rather soft plastic the case is made from and can easily tear it.

If you are fitting the busboard, it is best done at this point. A passthrough connector plugs into the back of the busboard and slots onto the accelerator slot on the motherboard. The cradle has support posts which match to screw holes on the busboard, keeping it in place. Connecting the video adapter is the only tricky part of the operation. The adapter has three chip sockets which press down, inverted, onto three of the chips on the motherboard, and there is a single trailing wire that must be soldered to the leg of a chip. The connector then plugs into the busboard.

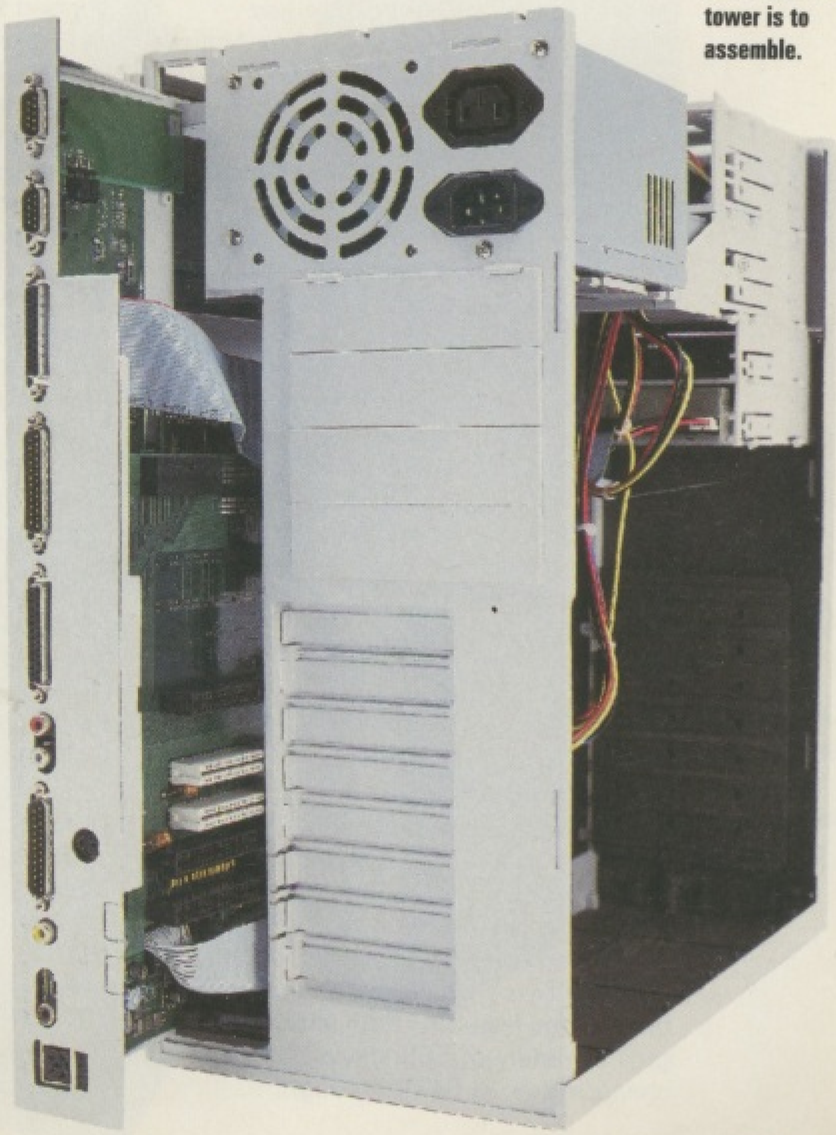
Once this is done, the cradle is ready to be slotted into the case. The side panel can be removed and the cradle screwed to a bracing strut to lock it in place. With the other side panel removed, the motherboard can be accessed.

A rather major design oversight means that at this stage you run into problems. The passthrough connector adds a little to the overall height of the motherboard, and with it fitted there is no room in the case for an accelerator. The modular design of the case allows an extra bay to be snapped onto the top of the case, these bays costing another £30. Getting one of these is a necessity if you want the busboard.

Your floppy drive should be extracted exactly as described last month, with the mounting bracket removed. It slides easily into the floppy drive bracket of the case and is connected via the long cable supplied to your motherboard. The face plate of the tower has built in blanking plates for internal floppies. An IDE connector plugs straight into your motherboard and gives you provision for a pair of 40 pin devices.

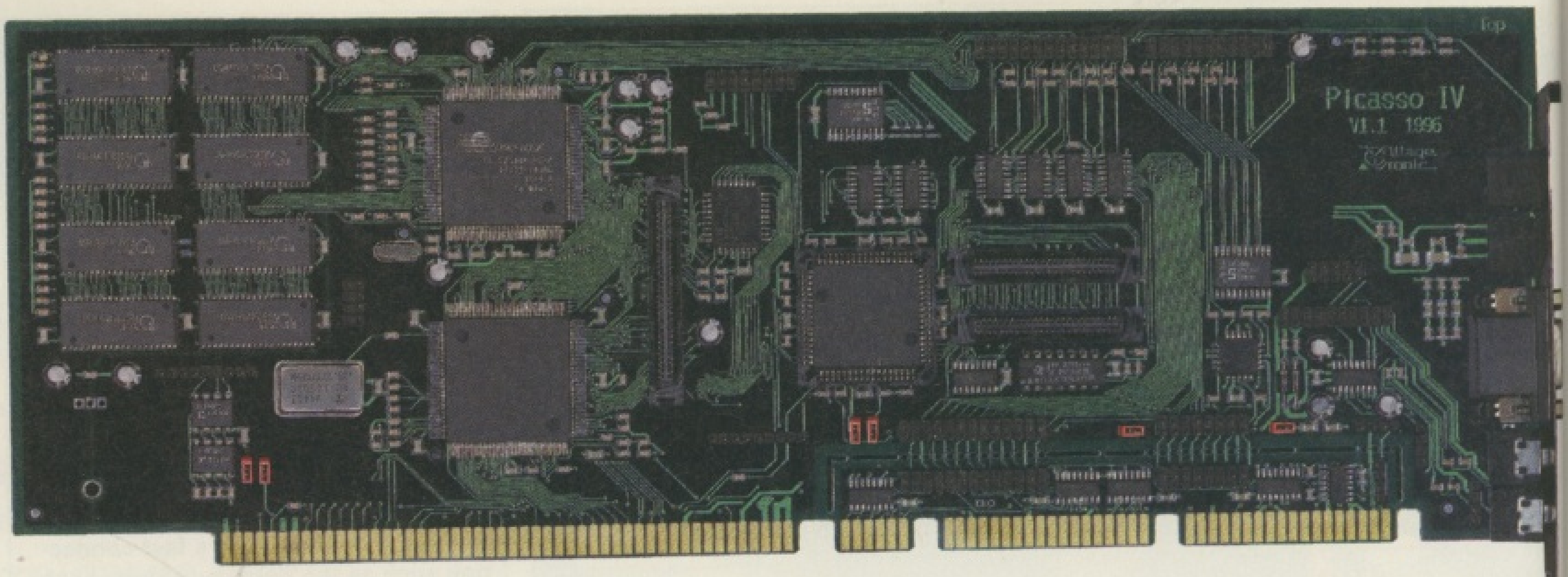
A cable connecting the LEDs at the front of the case plugs into the motherboard, and the power connectors from the PSU are connected to your drives in the normal manner.

To finally tioe things up, a single eight-way power connector dangles from the power supply – this is connected to a header on the busboard. You can now plug in any Zorro cards, close up the case and you are ready to go with your new super Amiga.



▼ **This exploded view shows how easy the tower is to assemble.**

Continued overleaf ▶▶▶



▶The best Zorro card yet? Read all about it on page 58.

The mark of Zorro

The Zorro slot has been around for some time, since the very first Amiga 1000 in fact. The interface standard only turned into a physical 'slot' with the A2000 and it was then known as Zorro II.

A Zorro port is a 100 pin slot in a straight line which allows for full auto-configuration of inserted cards. This means that any ROM and RAM on board the card is automatically mapped into the Amiga's memory space. Yes, the Amiga did this right back in the 80s, where as it became a 'revolutionary feature' on the PC in only 1995 (and it still doesn't work properly).

Just about any kind of peripheral imaginable can be added to the Amiga via a Zorro slot. For over 10 years third party manufacturers have been creating all manner of add-ons for big box Amigas. Whether you've got a real big box Amiga or whether your Amiga has been newly converted to a tower, the addition of Zorro cards can give your Amiga new life. Here we'll look at some of the common cards in each area.

SCSI cards

The first Zorro card ever made was the A2090 XT MFM hard drive interface. We actually have one of these museum pieces in the office. It lived at the heart of the A2000HD machine, complete with a monster 20Mb MFM hard drive bolted onto the card. It was improved to include a proper SCSI interface with the 2091. Some of these cards are still in use today although they're only useful with late revision ROMs on-board.

There's been a lot of SCSI cards on the Amiga and one that's stood the test of time well is the GVP HC-8 SCSI card. It also has facility to add memory but requires the slow 16-bit variety. The controller performance is acceptable and the software is also reasonable. It sells for £99.95 from Power Computing. You can buy a third party ROM upgrade for the GVP called Guru ROM. This is far better driver software which makes the card faster, uses less CPU time and supports a greater variety of SCSI devices. It's not a cheap add-on at £49.95 though.

Probably the best current SCSI card is the Octagon SCSI card from Bsc. It has the same design as the GVP card with sockets for 8Mb of 16-bit memory and an external 25-pin D SCSI-1 style connector, though it supports SCSI-2 commands. The software is far better as standard than the GVP HC-8 and performance is mildly better though not up to that of the HC-8 and Guru ROM combination. It's a high quality card which has proven to work well with a variety of hard drives, CD-ROMs and the Zip drive. It doesn't work with the SyQuest EZ135 though. The Octagon costs £99 and comes from Golden Image.

Rare as hen's teeth are the Porches of Amiga SCSI cards, the DKB 4091 and Z3 Fastlane. These are Zorro III cards which support full 32-bit Direct Memory Access or DMA for short. That means they use very little CPU time when transferring data. They're also much faster and support the SCSI-2 'Fast' protocol for even higher speed. Unfortunately these cards were very expensive and we are not aware of any dealers stocking them any more.

I/O cards

Not enough ports? What you need is an I/O (in/out) expander card in a Zorro slot. These can give you high speed serial ports which are much better than the Amiga's ageing internal unit. They can also add Parallel ports for use with networking or driving a printer while your internal port connects to a sampler or some other device.

There's a few around but the most common units are the GVP IO Extender which provides two high speed serial ports and a parallel port and the BSC Multiface III of identical specification. The GVP Extender sells for £69.95 from Power Computing while the Multiface III rocks in at £79 from Golden Image. The balance must go to the Multiface III since Parnet and MagPLIP (TCP/IP driver) drivers are available for it and it doesn't need another add-on panel with the extra serial port like the GVP.

For those with a real need for lots of serial ports, Golden Image have a card known as the 'Spider' which sports eight serial ports capable of 57,600 baud each, ideal for a multiline BBS sysop, but it'll set you back a cool £299.

Ethernet cards

If you want to network and network properly, you can't beat Ethernet. It's designed to be extremely fast (around 1Mb/s), can handle very long cables and a lot of machines simultaneously. Once an Ethernet card is slotted in, it will possess a so-called SANA-II device driver which something like Miami or AmiTCP can use. Uses range from file sharing to getting your Amiga on an office/university Internet

PCI Slots – What's it all about?

You may have heard some talk about PCI slots. PCI is an interface standard like Zorro III. While commonly found on PCs, they are not limited to that platform. However because the PC market uses this standard, there's a wealth of high performance PCI cards available. If the Amiga grows PCI slot compability, we could use those powerful cards too. Some PCI cards that it would be highly desirable to run might be, Adaptec's SCSI Ultra cards, Matrox's fast graphics cards, Ethernet cards and even the 3DFX 'Voodoo' 3D hardware. The best news is that all of them cost lots less than Zorro cards. The bad news is that we're yet to see a 100% working PCI slot on an Amiga expansion. The Picasso IV apparently has a PCI compatible slot, though some form of physical adapter would be needed. Software drivers would also need to be written for any supported cards. The Micronik Zorro busboard looked at here has 2 PCI slots but it requires a PC-on-a-card to be plugged in to make use of them. Darn.

connection, much like we do at CU Amiga.

There's two current cards which are available. The Hydra Systems Amiganet card sports both Coaxial and 10-base-T (telephone cable) connections and costs £149 from Hydra direct. There's also the Villagetronic Ariadne Ethernet card of identical specification except it also has an extra parallel port. It costs £149.95 and is available from Blittersoft.

Sound cards

There's a good range of 16-bit sound cards available for the Amiga although sadly they tend to be let down by software. Macrosystem's Toccata is better than most since it comes with sampling software to sample to RAM and hard drive. Naturally it can play full CD-quality 44Khz 16-bit audio and is well supported with the AHI audio retarg system. The Amiga's best sound tracker, OctaMED SoundStudio as found on the March issue of CU Amiga, supports the Toccata directly. Good news, but we had trouble finding a distributor for it in the UK; Macrosystem's telephone number in Germany is +49-2302-949490.

Upmarket and showing buckets of promise is Petsoff's Delfina DSP card. More than just a sound card. The unit comes equipped with a 40Mhz Digital Signal Processor capable of performing all kinds of operations on audio in real time. Apparently the authors are working on an MPEG audio layer-3 player for the DSP which would take the load off the CPU and provide perfect 16-bit playback. Naturally it samples also and is provided with a software control panel to switch audio inputs from mic/line levels and so forth. The supplied effects program is fun to play with. It also has an AHI driver and Octamed SoundStudio supports it directly again. However we found the DSP had a tendency to crash for no reason. Again there's no UK distributor. Priced at around £300 from Petsoff.

On the cheaper end of the scale is the Prelude, a simple 44Khz 16-bit player/sampling card which oddly has no physical support to hold it into a slot, apparently for A1000 compatibility. We managed to improvise some support anyway and it seemed to work fine. It comes with basic software and the obligatory AHI driver in addition to a welcome AudioLab 16 driver.

The Prelude is available from Albrecht Computer Technik in Germany (tel: +49-4773-891073). No price details are currently available.

We're somewhat unhappy with the situation sound card wise. There's not a lot of interest in selling the cards – they're too expensive and the software support has been quite bad. The Amiga has the makings of a professional studio machine were it not for these facts. Thankfully the AHI audio RTG system is going much of the way to solving the software issues. All we need is cheaper hardware and someone to sell it.

Graphics cards

We come to the holy grail of Zorro cards, probably the single greatest reason why anyone would choose to add an expensive and complex Zorro expansion to an A1200. It also probably swayed many of those big box Amiga owners into forking out extra for a 2/3/4000. Adding a graphics board leads to a miraculous change. Unlike sound cards, almost everything benefits from the change right away (apart from most games).

The two big players of the moment are the Picasso IV and Cybervision 3D cards. Go straight to page 58 for this month's review of the Picasso IV and a new look at the Cybervision 3D with new software. Both of these cards are dual Zorro II and Zorro III autosensing cards. The extra speed of Zorro III has a lot to offer graphics cards hence the support in that area. In fact they are often the only Zorro III cards in a typical big box Amiga.

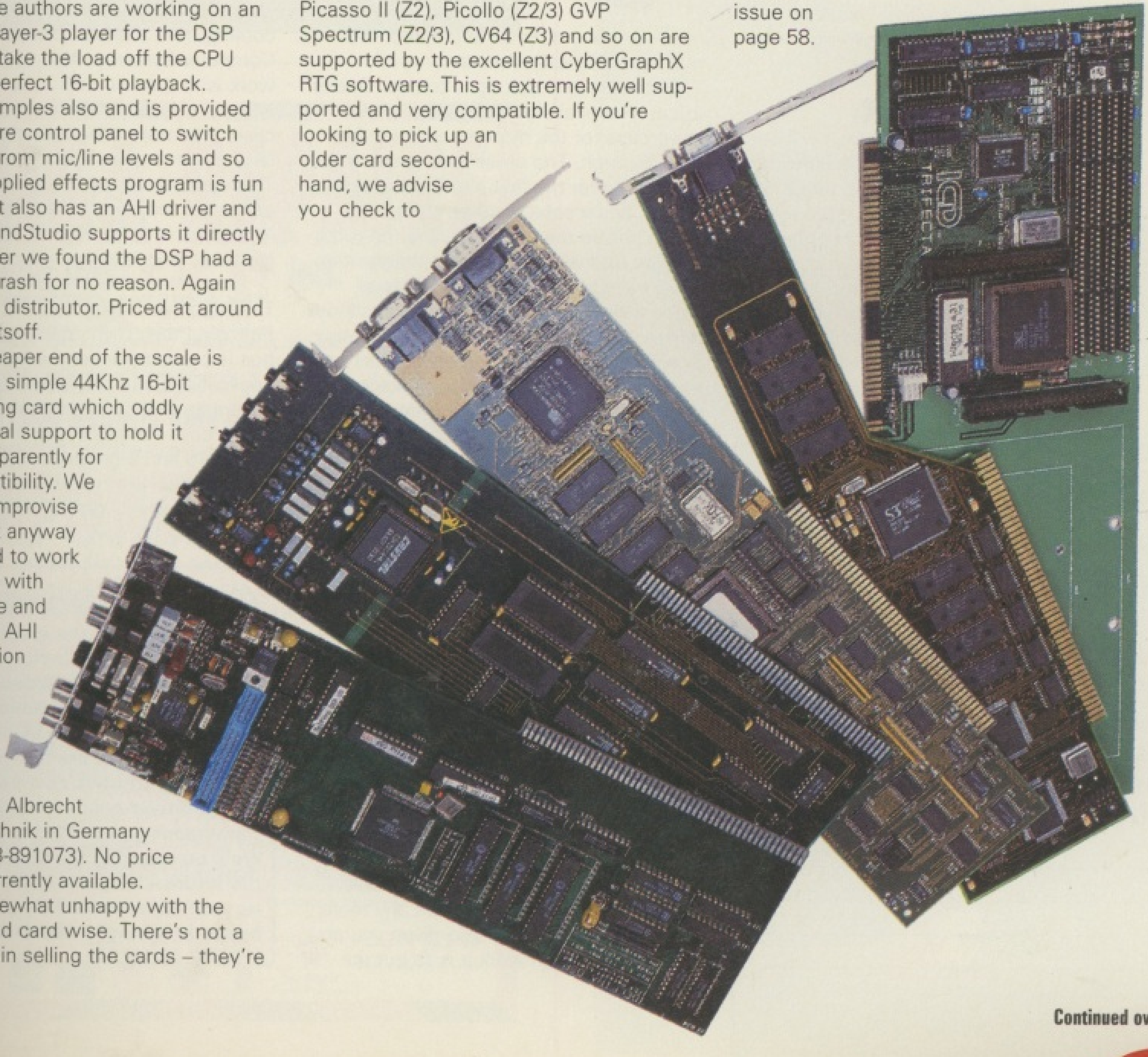
Most of the older cards such as the Retina (Z2) and the Retina BLZ3 (Z2/3), Picasso II (Z2), Picollo (Z2/3) GVP Spectrum (Z2/3), CV64 (Z3) and so on are supported by the excellent CyberGraphX RTG software. This is extremely well supported and very compatible. If you're looking to pick up an older card second-hand, we advise you check to see if there's a CyberGraphX driver. The original software provided with the Retina, Spectrum and Piccolo was particularly dire and will need to be replaced with CyberGraphX, available from Blittersoft.

The new card front can be summed up quickly as follows; the CyberVision 3D is inexpensive at around £175 but you'll need the scan-doubler module to even switch Amiga video. Otherwise you'll be needing a two monitor set-up. It also has some nice MPEG video players and the 3D fuctions may take off in the future.

The Picasso IV is more expensive at £299 but comes with a built-in flicker fixer meaning you only need one SVGA style monitor. It also has the edge when it comes to performance. It also uses a different RTG software called Picasso 96 which is largely CyberGraphX compatible anyway. The CyberVision 3D can be obtained from Gordon Harwoods while the Picasso IV comes from Blittersoft. See the Picasso IV review and CyberVision 3D update in this issue on page 58.

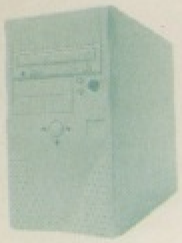
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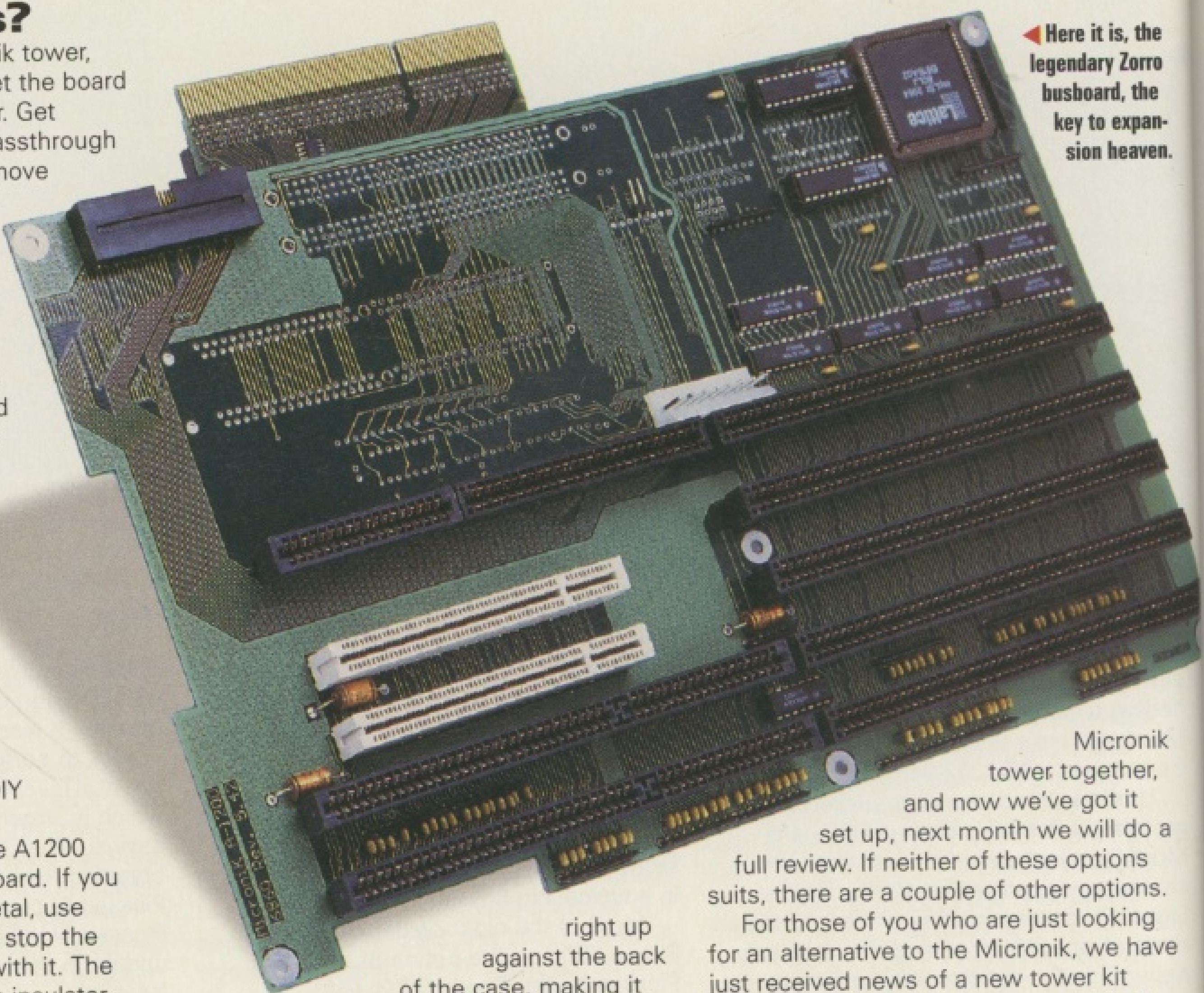
◀ Sound cards, graphics cards, I/O cards– just some of what Zorro has to offer.

Continued overleaf ▶▶▶



Other options?

If you don't fancy the Micronik tower, there are options. You can get the board on its own and DIY the tower. Get yourself the busboard and passthrough connector first of all, and remove the motherboard from your computer and connect the two together. You will have to rig up support for the bottom end of the busboard. A small block of wood can be glued to the top of the metal shield around the RF modulator on the Amiga motherboard; a screw can then pass through the mounting hole in the busboard and into this block. A spacer can be wedged between the two boards at the front end, or a small bracket can be constructed to hold it in place. If you are a bit of a DIY wizzkid, you might want to produce a cradle to take the A1200 motherboard and the busboard. If you make your cradle out of metal, use some insulating material to stop the boards coming in contact with it. The A1200 comes with a plastic insulator beneath it, but you will have to rig something up for the busboard.



◀ Here it is, the legendary Zorro busboard, the key to expansion heaven.

The tricky bit

At the back of a tower case, you will see a group of horizontal slots. The Zorro boards are meant to align with these slots to allow things to be plugged into them. The addition of the busboard adds about 4 cms to the depth of the motherboard, and many towers are too narrow; cards plugged into the slots will end up beyond the holes. If that wasn't enough of a problem, you will also find that to get a card to fix to the back slot properly, the motherboard will have to be mounted right up against the back of the case, making it very difficult to connect the rear motherboard sockets.

There are two solutions to this. One is to cut a vertical slot in the back of your towercase for the motherboard sockets to fit through. The other is to cheat. If you want to go for the first and more elegant option, find a case that has plenty of space beside the rear slots, line the motherboard up inside the case in the position it will have to be in for Zorro cards to reach the rear slots and carefully mark out where you will have to cut. Use a fretsaw or a jigsaw with a metal blade and use a metal cutting lubricant. Wedge pieces of wood against the rear plate before you cut it. The more the rear plate is able to flex, the harder time you will have cutting.

How to cheat

The easiest method is to cheat. Mount the motherboard as described last month. Cards are slotted in as normal but do not reach the rear of the case. You will need some additional support for your cards this way. A couple of wooden uprights with small shelves are ideal. Cables are passed through the holes in the back of the case and plugged straight into the cards. Messy, but it works.

Alternatives

We have covered the basics behind installing the Micronik board into a DIY tower, but there are so many variables involved that this can never be any more than a guide. We have also given you an idea of how much work it is to put the Micronik tower together, and now we've got it set up, next month we will do a full review. If neither of these options suits, there are a couple of other options.

For those of you who are just looking for an alternative to the Micronik, we have just received news of a new tower kit coming from a British company, Intrinsic Computer Systems. Also designed to work with the Micronik busboard, Intrinsic's Amigo is a CE approved metal case with more drive bays than the Micronik and at a slightly lower price. This case went to press at the same time as we did, but we are hoping to get one in for review to go head to head with the Micronik next month.

Rivals to the busboard are even rarer. The Ateo bus board, a similar concept but using their own non-standard data bus is currently undergoing patent applications, but promises to bring the advantages of Zorro cards at a fraction of the cost – the aim is to produce the busboard and a graphics card for around £160, under half the price of the cheapest Zorro equivalent. Well, that just about wraps it up for now. ■

A Final Word ...

We are repeating the special offer for the 44-40 pin IDE adapter from part 1. If you had a delay ordering previously, it was because of the phenomenal response – Stack sold many hundreds – but new stocks are now in. We are also trying to track down a source of Amiga power connectors to save you cannibalising your PSU.
We'll be covering this topic further in the future – why not write in and tell us your experiences? Good luck and happy towering! – Mat & Andrew.

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All 3.5" IDE Hard drives require an adaptor cable when fitted into an A600/1200 (£15.00 when purchased with a drive) £19.99 when purchased separately.

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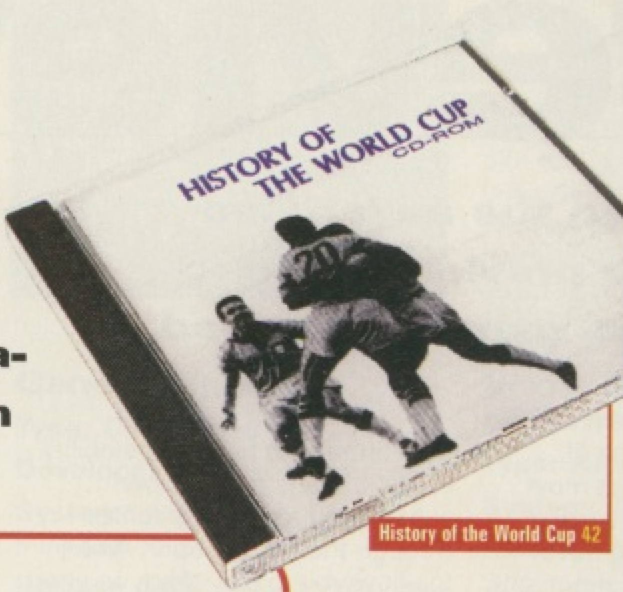
Taking over the reins of the game coverage from Lisa, I'm bringing you the games section this month, featuring a special previews focus and an interview with Peter Molyneux.

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Previews Special

Reviews

Tips & Guides



History of the World Cup 42



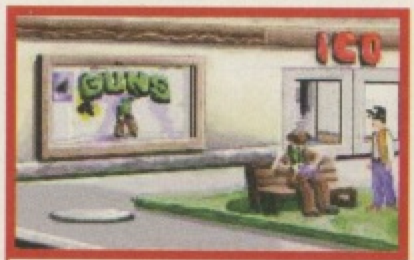
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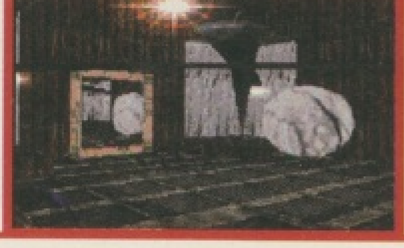
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Previews

In a change to the advertised program, our preview pages go into future gaming overload.

There is a sense of doom amongst most Amiga gamers – and I'm not talking about first person perspective shoot 'em ups. We've all experienced the gradual decay of the Amiga as a games platform over the last few years, the rise and rise of the consoles and the transformation of the PC from a drab unfriendly business machine into the world's most expensive games machine seeming to ring a death knell. The reasons behind this fall from grace are many and varied, but the old story the games companies come up with, that the Amiga is just not up to the task, aren't entirely true – certainly if you have an accelerator and a CD-ROM drive. And just to prove it we have spent the month searching out the most exiting products in development. Here is a small sample – if you want to believe that Amiga gaming is dead, don't read this.

Almagica - Scions of a Forgotten World

Type: Dune II/Warcraft clone

Developers: DSP

System: TBA

Release: TBA

This sort of real time strategy/war game is becoming enormously popular and seems to be something of a holy grail amongst Amiga game programming teams. DSP are a Swedish programming team with a lot of ambition. Scions takes the basic form of Dune II but transports it from a Science fiction setting into a fantasy one.

Ordering your forces to do anything from cutting down trees to launching full scale attacks on the castles of your foes, you have to find the balance of resources necessary to build up your forces to achieve final victory.

One of the most intriguing things about this game is that it is probably the first Amiga game to be written with full retargetability in mind. Many games now support retargetable graphics through the CybergraphX library to allow you to play them on your graphics card, but this one also supports the AHI system to allow you to retarget the sound through a soundcard too.

Brainkiller

Type: Doomclone

Developers: Titan systems

System: Will require good acceleration for playable speeds

Release: Imminent

There has been a little demo knocking around for the last little while of a doom game called Braindead. In fact you'll see a review of it this month in the PD section. The programming team behind this game has been promising that it would become a commercial release, and here it is. A demo of the game arrived in the office yesterday, and we've had enough of a go on it to assure you that there is a lot more in the game than there was in the demo. The old favourite punch and kick routine is still there, but there were a whole lot fewer explosions in Braindead than there are in Brainkiller. There's going to be a lot of competition for the crown of Amiga doom clone king over the next few months, and this one is going to be well in there.


Brain Killer






Final Odyssey

Explorer 2260

Type: Space trader simulation

Developers: Digital Anarchy Software/Chris Page

System: '030 strongly recommended, 4mb min., hard drive

Release: Don't hold your breath

This one could well be the game that Frontier 2 might have been. It's still pretty early days for Explorer 2260 yet, but author Chris Page has some very interesting ideas for his future war/trading game. Over 100 ships, thousands of ship upgrades and texture mapped polygons all sound exciting enough, but the epic concepts behind this game are what makes it sound really interesting. Complex political situations can lead to missions a LOT more complex than "go and assassinate this bloke on some planet somewhere", even up to interplanetary war. Promotion in rank actually means something, the player can even eventually be put in command of a fleets or space stations. The bulletin board idea of Frontier: Elite 2 is vastly extended to make the Interstellar Information Networks (IIN), a kind of futuristic internet, which the player can actually post their own adverts to.

Some people have pointed out the similarity in concepts between Explorer 2260 and Babylon 5 – this is not Babylon 5 – the computer game, but the influence is strong and B5 fans should be very happy indeed.

Final Odyssey

Type: Adventure

Developers: Vulcan

System: AGA, CD-ROM

Release: TBA



Brain Killer



Vulcan made their names with the top down talkie adventure series Valhalla (you KNOW what that is), and Final Odyssey – Theseus vs the Minotaur looks to be a return to their roots. Except that Final Odyssey offers graphics to drool over and more action than the Valhalla games too.

Forgotten Forever

Type: Dune II Clone

Developers: Charm Design

System: Minimum AGA, hard drive, CD-ROM, '030/50 highly recommended

Release: TBA

One of the game projects attracting the most interest at the moment, Forgotten Forever is real time action strategy game in the Command and Conquer mould. Inspired by Dune 2, the brilliant predecessor to C&C, Forgotten Forever promises to be something really special. The Amiga's hardware is actually very good for this sort of game, and there is no reason why Command and Conquer shouldn't be ported to the Amiga, but if this effort from Hungarian programmer Ferenc Zavacki and graphic artist Csaba Kemeri lives up to the screenshots that have been circulating, we might not need it.

Features include landscapes 16 times as large as in Dune II, multiple terrain types, 25 vehicle types, sampled speech, basically everything you would expect from a rival to C&C. The author is even talking about implementing TCP/IP modes for network multi player games. Forgotten Forever will run on most 256 colour screenmodes and will be CyberGraphX compatible. Rest assured that as soon as we see a working demo we'll tell you more.

Foundation

Type: Dune II/Settlers clone

Developers: Paul Burkey

System: A1200 & CD-ROM minimum, 6Mb highly recommended

Release: End of year?

Originally inspired by Settlers, author Paul Burkey cites Warcraft 2, Command and Conquer and Mega-lo-mania as other influences. Foundation will display screens up to 640 by 480 and uses disk caching to allow many megs of data to be immediately available. Gameplay features include a massive database of all the people in the kingdom you rule, many different types of building, advanced combat strategies, inventions, wizards and an intricate trading system. You will be able to play against up to three computer players or in split screen mode against a human and up to two computer players.

The author has been looking for support for this title, a problem that plagues independent programmers, but should have arranged a backer by the time you read this.


Foundation



Genetic Species

Type: Doom Clone

Developers: Ambrosia / Vulcan

System: A1200, 8mb, CD-ROM minimum

Release date : "As soon as possible!"

Everyone said it couldn't be done until Gloom, Breathless, Fears and AB3D proved them wrong. Amigas can do doom clones, but this one is a bit different. Previous titles were playing catch up, whereas this one is a genuine Doom beater. OK, so the PC games market has moved onto Quake, but here at last is a Doom game that your Pentium owning friends will like.

This game really likes a decent set-up. Give it a graphics card and an '060 and you have a stunning game. Fast, smooth textures, stunning lighting and fire effects – we're all waiting to see how it pans out when the gameplay is fully implemented. Until then, check out the demo on our CD, fire that flame-thrower around and watch those brilliant light-sourced glowing fires effects.

Hellpigs

Type: Adventure

Developers: Vulcan

System: '020 2mb RAM CD-ROM drive. AGA and 6MB for FMV

Release: August

The game that persuaded Vulcan to go CD only, this was originally going to come out in a cut down version for the floppy customer, but even that would have taken 22 disks!

The Hell Pigs are a secretive special forces unit, perhaps even some kind of execution squad. All that you can be sure of is that wherever the weird and unexplained looks perilously close, they won't be far behind. With a plot that sounds like a cross between the X-Files and Predator, and graphics that look very interesting indeed, this game could be a real winner. Vulcan certainly think it will be.

In the Shadow of Time

Type: Adventure

System: AGA

Release: TBA

When Henrik Smiding says he is going to write an adventure game




Hellpigs

The CD-ROM revolution



The observant amongst you will have noticed the frequency with which the word CD-ROM appears under system requirements. No-one wants to be dictated to about what add-ons they should buy, but there is no doubt that if you want to play games in the future, a CD-ROM drive must be high on your shopping list. You simply can't make games compete on floppy any more. Many of these games simply wouldn't fit on floppy disk – Hell Pigs would take 22, Wendetta would take 40, Myst would take around 700.


Myst

that beats the hell out of Monkey Island, you might feel justified in being a little sceptical. Once you've tried the demo a little, you won't be so sure he isn't going to do it. The game flows very well, the system of command selection being very intuitive and smooth. The graphics are looking very impressive at the moment, with glorious 256 colour screens running quickly and easily, and very solid animation. It is always however the quality of puzzles and the avoidance of cheesiness in the jokes which makes or breaks an adventure, and on those fronts we will just have to wait and see.

Myst

Type: adventure

Developers: ClickBOOM!

System: AGA, '030, 4Mb and CD-ROM. '040 and 8Mb recommended

Release: Summer

Myst is generally regarded as the greatest CD-ROM adventure of all time, and is reputedly the biggest selling too. An enormously atmospheric graphical treat, this game entranced millions when it hit the PC and Mac some time back.

The Amiga version is actually the result of an Internet hoax – a fake demo of an Amiga version appeared on the Aminet about a year ago, and the huge interest this spawned made MYST developers Cyan wonder whether there wasn't room for an Amiga version after all. ClickBOOM! stepped in with an offer for the license and are rushing it out for the summer. This is presumably because Cyan want it to co-incide with the publicity for the forthcoming Riven, the five CD epic sequel to Myst, which ClickBOOM! will no doubt also convert if interest is high enough. Maybe we should start spreading rumours of an Amiga version of TFX!

On Escape

Type: Platform / Adventure

Developers: The Invictus Team

System: AGA, 4mb, CD-ROM drive

Release: TBA

I've always been a huge fan of Another World from Delphine, a platform game that had a freedom of movement and action which no platform game before or since seems to have managed to match. The Invictus team, colleagues of Forgotten Forever's Charm Design in Hungary, seem to feel the same way, because they are working on a title which owes more than a little to Another World.

On Escape contains many interesting graphical features. As well as giving the main character over 600 frames of animation , Invictus have included graphics routines for reflective puddles, rippling screens and waving lights for underwater screens, realistic rainfall, beams of light and so on. There are full-screen animations throughout the game and huge intro sequences. I don't know about you, but I can't wait.



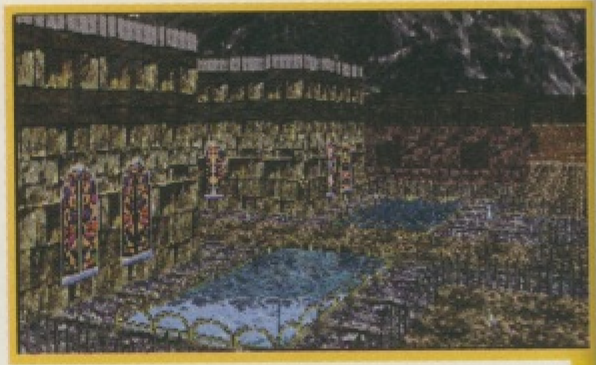

On Escape

Trapped 2

Developers: Oxyron

System: AGA, 6Mb, CD-ROM drive minimum. '030/50, 16Mb recommended. Graffiti and Picasso '96 support

Release: Summer




Trapped 2

Wait a minute, Trapped 2? Whatever happened to Trapped 1? Well you may have seen a demo of it on a recent CUCD CD-ROM, but this commercial game from Germany has, as is something of a trend with German games, never been released over here. This is something that CU Amiga intends to doing something about, and rest assured we will be bugging some of the big UK software houses about picking this little beauty up.

Trapped 1 was an RPG with a Doom engine. And what a doom engine it was. Fast and smooth and very atmospheric, Trapped 1 had some truly impressive features, such as some excellent light sourcing routines, and if you want to impress the hell out of anyone, just wander past a light source and show them that lens flare!

Now if Trapped 1 is so exciting, what can Trapped 2 be like? Well if your machine is up to the task, try out the demo on this month's CD and prepare to be blown away. This game is going to be HUGE. While most of its rivals are still struggling to match the clunky old style of Doom, this game is doing the kind of advanced 3D of the most up-to-date first person games on the PC or Playstation: proper 3D graphics, excellent textures, full light sourcing and genuinely 3D polygon based monsters. There is of course a down side – the fastest Amiga on the planet is only as good as a very low end Pentium PC for rendering 3D polygons, and while this is just about playable on an '030, an '060 and graphics card is really called for.

What would really make this game would be a PowerPC version to go with Phase5's Powerup cards – it would probably sell a few of the cards, too.

Wendetta

Type: Shoot 'em up

Developers: Vortex Design

System: AGA, CD-ROM

Release: Imminent

This blaster has been on release in Germany for a while now, and Islona have just picked it up for distribution in the UK. Wendetta is played from two viewpoints, one a standard horizontal R-type view, the other the kind of swirly 3D tunnel effect that we've seen in demos for years and always wondered why it never appeared in games.

The most impressive thing about this game is that it manages to tie in the fast moving blaster action of yore with bang up to date 3D rendered graphics. Very nice to look at, and the previews we've seen seem like a satisfying shoot 'em up too. ■

Andrew Korn

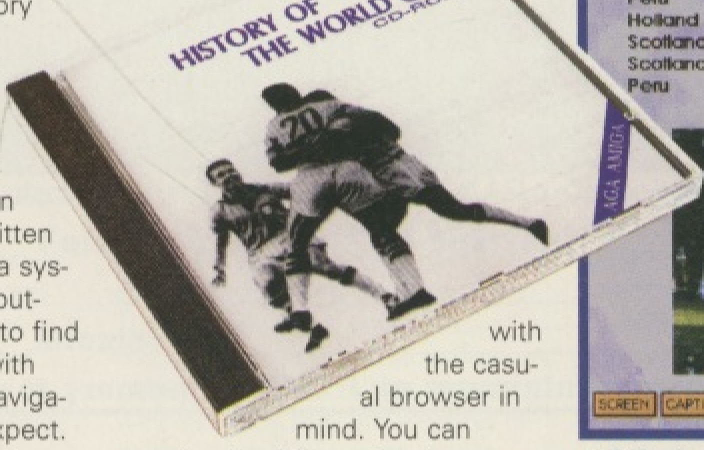
The History of the World Cup

AMIGA MAGAZINE SUPERSTAR

■ Price: £14.99 incl P&P ■ Publisher: Wisedome Ltd. © 0171 702 9823

CD-ROMs are the future of Amiga entertainment – here's one that will keep Amiga owning footie fans entertained for hours.

Wisedome's History of the Word Cup CD-ROM is not one of those all-platform affairs where the data is there but the presentation is secondary. This is an AGA Amiga specific title, written using the Can Do multimedia system. An intuitive system of buttons and menus allows you to find your way through the disc with ease, and supports all the navigational freedom you would expect.

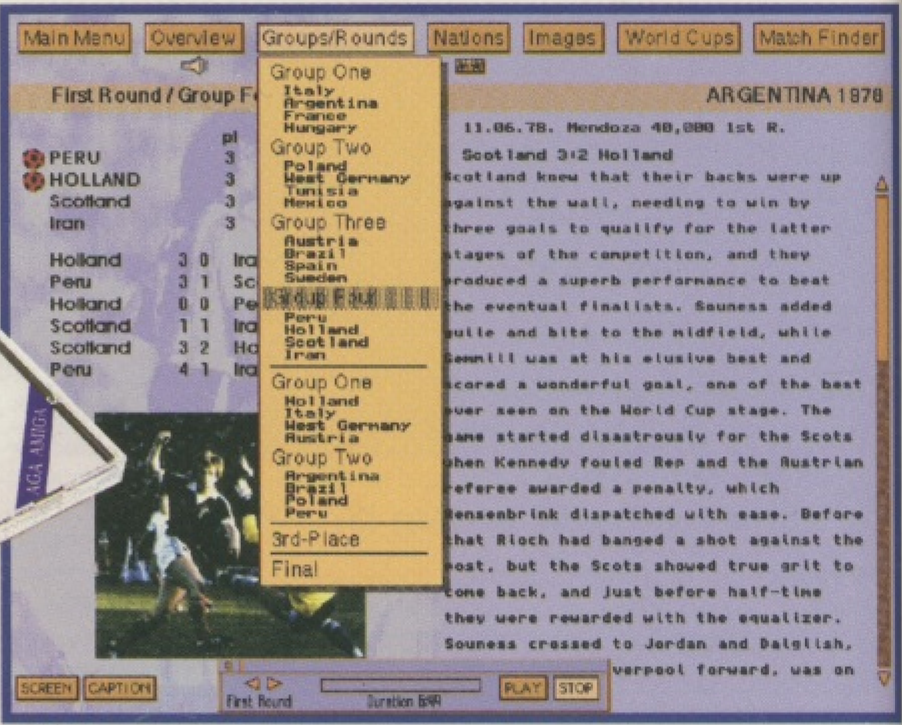


Calling Statto

Containing reams of information about every World Cup tournament, there is a danger that a project like this would end up being a CD-ROM equivalent of those impenetrable, phonebook-thick football factbooks that footie anoraks have lying around their houses. However, this one is designed with the casual browser in mind. You can examine the information by year, reading write-ups of every single match, or you can examine the performance of individual countries over the history of the tournament.

The multimedia capabilities of the CD-ROM format have not been ignored. The hundreds of pictures can be viewed alongside a caption to give them context, or displayed in glorious full-screen Ham8. The database of images can be sorted through in several different ways, but there is a noticeable lack of integration here. It would be nice if selecting the overview text for a particular tournament or selecting a biography of a particular player caused an appropriate image or two to pop up. On the audio front, there is around three hours of sampled voice overs. Using samples saves space at the cost of sound quality, but it makes a good change from reading all the overviews.

There are all sorts of ways this could have been better. The use of voice overs is a nice idea, but a little sterile. Some use of

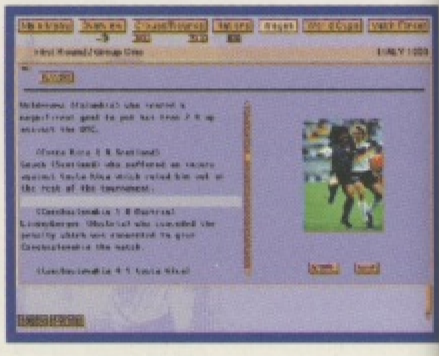


▲ **Following Dalglish and the Tartan Army's progress in the 1978 World Cup.**

relevant samples – crowd roars, commentary, and so on – would have added a lot of atmosphere. A cross referencing database would have been a nice touch – we decided to look for the largest score in any world cup match, but the only way of doing this was to search through them all. Niggling points like this mean that this CD-ROM is more the browsers encyclopaedia than the ultimate reference.

Goooaaal!

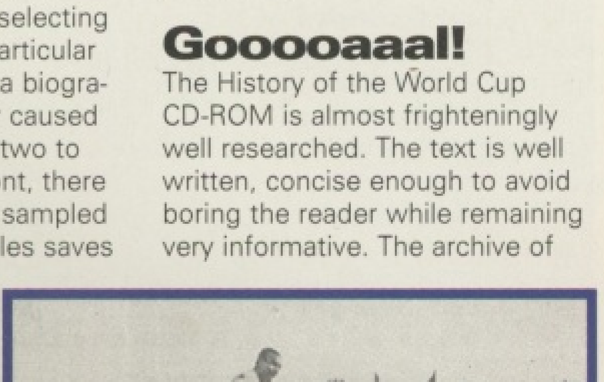
The History of the World Cup CD-ROM is almost frighteningly well researched. The text is well written, concise enough to avoid boring the reader while remaining very informative. The archive of



images is impressive, and Wisedome have even managed to find pictures dating back to the very beginning. For about the same cost as a book on the subject, this disc offers you a lot more in a very friendly format, and goes to show there's more to CD-ROM than clipart collections.

Andrew Korn





HISTORY OF THE WORLD CUP

A500 / A500+ / A600 / A1200 / A1500 / A2000 / A3000 / A4000

■ workbench version	XXXXX
■ number of disks	CD-ROM
■ RAM	XXXXX
■ hard disk installable	XXXXX
graphics	90%
sound	86%
lastability	91%
playability	xx%

OVERALL
A football fan's delight.
90%





Castle Kingdoms

■ Price: £12.99 (incl P&P) ■ Publisher: Mutation Software ✆ 01705 672616

Gauntlet twisted into an isometric perspective? The classic coin-op is updated with Mutation's latest offering.



▲ Enter the blue castle and seek the sapphire.



Ohhhh... yes indeedy, we decrepit old gamers remember an arcade adventure called Gauntlet which was in its time the most fantastic multi player game since the invention of the microchip. Dungeons and Dragons from an overhead perspective, Gauntlet allowed up to four gamers at the same time to adopt the role of Dwarf, Warrior, Elf or Priest and charge around complex mazes fighting assorted nasties while collecting food and potions. Amiga gamers were hoping that when the Amiga version of the game finally came out, it would be totally faithful to the original coin-op. Alas, our wait was never repaid. All these years on and a game appears which looks like Gauntlet's great grandson. Could it recapture that old excitement? Enough of my nostalgia, let's get on and discuss Castle Kingdoms.

Gemstones

The game world of Castle Kingdoms is divided into five distinct sections, or castles. In a throwback to the classic RPG plot lines of the past, the aim is to recover the five mystical gemstones, hidden within each castle kingdom, that form a powerful magic talisman.



Leading a party of five adventurers – Knight, Princess, Warrior, Elf and Wizard – you have to fight your way through the hordes of demented creatures that are let loose upon you. As you penetrate the castle's defences, you find potions and spells which you can pick up and use to your own advantage.

Lemming devils

The graphics are stylistically somewhere between the cute Japanese RPG style of Zelda and the distinctive race of little people that populate Sensible Software games. The isometric layout of the mazes works very nicely and is full of atmosphere, although the graphics aren't in the same league as the likes of Chaos Engine 2, and the over flattened perspective can be confusing.

Castle Kingdoms is easy to get into and flows well enough, but lacks weight. There is no multi-player option, which is a real oversight. It was in multi-player mode that the original Gauntlet really shone. Multi player modes can turn an otherwise ordinary game into a masterpiece, and a game like this just cries out for it.

The rather limited 'intelligence' of your foes means they have a tendency to run around rather more like slightly miffed chickens than fiendish orcs. The level of challenge they provide is fairly constant. Progressing through the levels gives you little feeling that you are moving forwards so much as sideways, the castles differing a lot in colour but not much anywhere else.

Castle Kingdoms is an average game, but way too easy and far too repetitive for the seasoned Amiga games player. I managed to make my way to the end on my first game. That in itself is its biggest stumbling block. Even though it's quite cheap, any game needs to present some kind of challenge. Even so, it could be worth a look if you specifically need a game that's not too taxing, maybe for very young kids. ■

Mark Forbes

Ordering Info:

Mutation Software
15 Burcote Drive,
Anchorage Park,
Portsmouth, Hampshire,
PO3 5UD U.K
Make all payments cheques/ postal orders/I.O.M. or cash payable to A.R. Cummings
Overseas customers add £2.00

CASTLE KINGDOMS

A500 A500+ A600 A1200 A1500 A2000 A3000 A4000

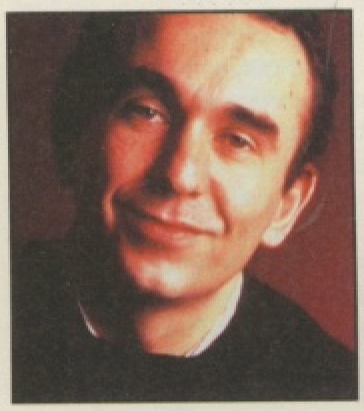
■ workbench version.........all
■ number of disks 1
■ RAM...............................1Mb
■ hard disk installable ....yes

graphics	60%
sound	54%
lastability	60%
playability	61%

OVERALL
OK for the younger Amiga games player. **60%**

Reach for the stars

He invented a whole new type of computer game and his name sounds like a food blender: Peter Molyneux gets the star treatment.



Name: ***Peter Molyneux***
Age: ***37***
Born: ***Kent***
Occupation: ***Game Developer, Bullfrog Productions.***
Biggest Successes: ***Populous, Powermonger, Populous 2, Syndicate, Theme Park, Syndicate Wars...***



Syndicate



CU: Tell us how Bullfrog Productions began.
PM: Initially Bullfrog was created by myself and Les Edgar in 1983 for games players by games players, although we actually started a business producing database and account packages for the Amiga. After a couple of low-key games projects, Les and I felt ready to create a game which would be unlike anything else then available. The inspiration for Populous was partly derived from our previous foray into business software. Through our understanding of the Amiga's capabilities, we were able to create the artificial intelligence engine which, although it has been refined and improved, still forms the foundation of all Bullfrog programs to this day.

"To be totally honest, the main reason we worked on the Amiga was because we were given several free..."

CU: Did you realise the seminal nature of Populous during its development?
PM: Although I realise now that Populous has created a new genre of game, at the time I was working on it I had no idea that this was what I was doing. I was just working on a game that I wanted to play. In fact I was nervous that no-one would think it was any good at all.

Our offices were visited by a journalist who was going to do the first review of Populous and after he had played the game we went down the pub. After a few pints I plucked up the courage to ask him what he thought of Populous and he replied that he thought it was the best game he had ever played. My first thought was that I must never let him play the game again, as I was convinced if he saw it again he would realise that his initial impressions had been mistaken.

CU: What are your personal favourite Amiga games?
PM: Dungeon Master and Speedball.

CU: Do you think the rise of the new game consoles has had a detrimental effect on the quality of contemporary games?
PM: Yes, I do think it is tragic that from the giddy heights of the mid-eighties when one in every four homes had a home computer, and therefore there was a wealth of bedroom programmers, that today there are so few. Nowadays its just too expensive for people to develop games in this way on the consoles and on PCs which is a great shame.

CU: If the Amiga was to get back on track as a mass market entertainment computer, would you consider developing games for it?
PM: Of course I would, but in saying that, it's obvious to me that in order for the Amiga to regain its former status it needs a very big push – its great strength has always been its accessibility and this coupled with a very significant upgrade in technology could make the machine more interesting for developers like myself.

CU: What was it about the Amiga that made it your first choice?
PM:To be totally honest one of the main reason we worked on the Amiga was because we were given several free machines by Commodore – but also at the time it seemed to be the machine without bounds, it had great graphics, good sound and was technically miles ahead of anything else around at that time.

CU: Would you consider making available the source code for Syndicate Wars, so that it could be converted to the Amiga?
PM: Yes, definitely because I don't see any real reasons or problems why we couldn't do that. After all we have no secrets or things to hide from anybody. ■

Mark Forbes

Tips Central

More tips and cheats to spoil your gaming fun, with an exclusive barrel of codes for Worms TDC straight from the programmer's mouth.

WORMS TDC

Worms creator Andy Davidson has kindly supplied us with a ream of secret codes for Worms The Director's Cut. Now we can see why the game was delayed so long ... Andy tells us these are just a few of the secret codes included in the game, so we'll badger him for some more for the next issue. All of these codes should be typed in exactly as they appear here.

On the title screen

JAMIE AND HIS MAGIC TORCH
Special weapons on/off
SUPA SHOPPA
Weapon crates placed on landscape instead of mines
RED BULL
Worms can jump higher, punch harder ...
PESTILENCE (Apocalyse Mode)
Worms burn when they die
LITTLE FLUFFY SHEEP (Sheep Mode)
Shooting any crate liberates a sheep
Unlimited fuel with Super Sheep!
TOTAL WORMAGE (Nostalgia Mode)
Original Total Wormage logo on panel
Weapon names put back to original names
NUTTER
All weapons, even each shot of an Uzi, do the damage of dynamite
MAGICAL MYSTERY TOUR (Mystery Mode)
Worm names aren't displayed
KARTONG APA (Monkey Mode)
Weapon names translated into Swedish!!
Kenny-on-a-Rope!!
OMNIPOTENT BLUE WORM (God Mode)
Worms aren't damaged by shots
All worms can walk on water
ARTILLERY
Worms can't walk or jump
PONG: Mouse pointer can hit grenade around
MAGNET: Grenade attracted to mouse pointer
GRAVITY: Grenade affected by gravity
BETONG ASNA: (Donkey Mode) – Concrete Donkey on title screen
BOING: Red+white Amiga ball on title screen
MUSIC: Title screen music on/off
WEIRDED: Weirds title screen colours
VERSION: Display version number
CHIPRAM: Display free chipram
ANDY
TONY
KILBURN
LA CIENDA HONDURAS
TBL
FISK
BEN HUTCHINGS
AMIGA
CHEAT

Landscape generator bits

LOW: Low water level (default)
MEDIUM: Medium water level
HIGH: High water level
WEIRDED: Weird landscape
NORMAL: Normal landscapes
1471: Play last level again
CUSTOM: Picks random custom level
GRAFFITI: Picks random graffiti level
FOREST: Only generate Forest levels
CAVERN: Only generate cavern levels
FOREST CAVERN: Only generate Forest cavern levels
ALL: Generate all levels

BANSHEE

This tip cheat, along with all the following tips on this page, comes from Keith Krellwitz. For those with the AGA disk version, type FLEV17 and press Return whilst on the title screen. You will now have infinite lives and be able to skip levels using the function keys. The screen will flash to let you know it's worked.

Alternatively, type I AM EXQUISITELY EVIL then press Return whilst on the title screen or during the intro. This will change the names on the high score table and you can now kill polar bears and people (if you're that way-inclined). Once again, the screen will flash to confirm you've entered the cheat correctly.

CD32 Banshee players can do the same as above by entering KANNIJADE KREW on the high score table to invoke the infinite lives/level skip cheat, using the top joypad buttons to jump levels. To do the polar bear thing, enter MARY WHITEHOUSE on the high score table.

BUBBLE AND SQUEAK AGA

Enter any of the following four passwords for various benefits:
HEFSBEER: 9 guy and 9 hearts
MAXIBABY: a new difficulty setting
BUTTHEAD: infinite hearts and lives
WHO CARES: a message from the programmer

GHOSTS & GOBLINS

A classic if ever there was one. Dig it out and enter your name as ")!(" to make yourself invin-cible, but you'll still lose your amour if you get hit (we couldn't find a copy to test this, so you may have to leave out the quotation marks). Also try typing DELBOY on the title screen for the same result.

PARASOL STARS

Press the right mouse button to skip to the next level. During the game, type A WORD to activate the cheat mode. If this doesn't work, try typing CYNIX instead (nothing will happen until you use one of the following cheats).

Now use the following keys:
M – get all three stars
T – end the stage
G – kill all baddies
1-7 – skip to that stage
C – extra credit
F1-F10 – skip to that level
D – die (very useful)
B – skip to bonus screen
X – skip to extra level

To find the hidden world, whilst on level three, kill all three nasties in the box. Some blobs like green peppers will appear. Collect them and you'll be whisked off to the secret level.

When in Ocean World on the fourth level, paralyse all the nasties and get the purple heart in the top left corner (if there is one). Get all three green fruits and you'll be transported to the last world.

Get yer free games!

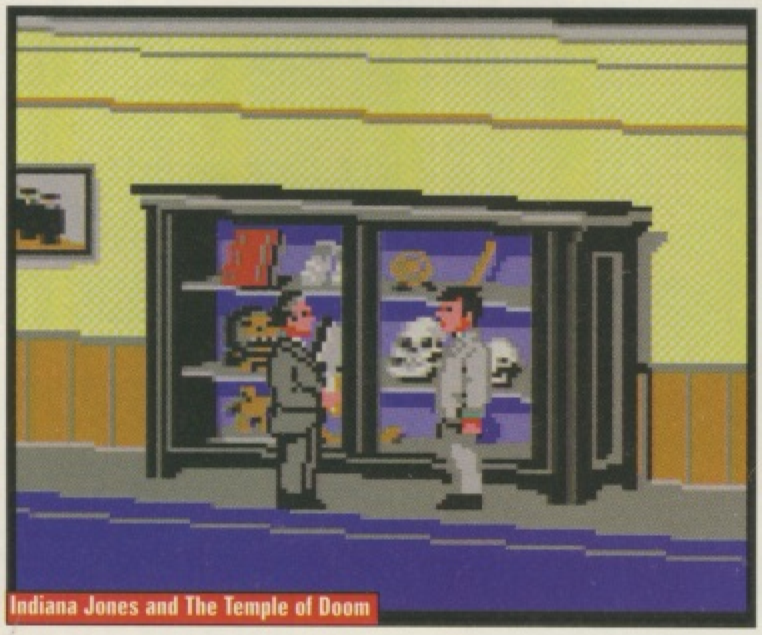
So you've got some decent tips have you? We'll see about that. The best tipster each month is entitled to a randomly selected mystery Hit Squad game, so don't keep 'em to yourself! Troubled adventurers on the other hand, can write in to Adventer Helpline, CU Amiga, 37-39 Millharbour, Isle of Dogs, London E14 9TZ.

Indiana Jones and the Last Crusade

On the zeppelin, I keep getting stuck at the ticket collector (what with not having enough money to buy a ticket and all that). Presumably it's got something to do with the travel pass, but without anyone to sign it, it's not much use.

Jim O'Connor, Co. Antrim

You don't actually have to get on the zeppelin, but if you do, as you guessed, you will need the travel pass signed. In this case, before you get to the airport you need to take a trip to Berlin, where you can get it signed by Hitler himself. At the airport, get Henry to chat to the man with the newspaper while you pick his pocket. Alternatively, pick up the book about how to fly a plane from the Italian library, and you can then steal the biplane from the airport instead.



Indiana Jones and The Temple of Doom

Future Wars

I've just got the hang of Future Wars, which I picked up at a local car boot sale recently. I've worked out how to use the time machine and teleported to the Medieval age, but once I get there I get beaten when I get to the muddy village, and beaten up by monks at that!

Iain Young, Basildon

When in Rome … the thing is, you're still dressed in jeans and trainers, which to a Medieval monk probably looks like the apparel of Satan. The trick is to go back to the river bank, climb the tree, wait for one of the monks to come along for a swim, then jump into his clothes while he's in the water.

Leisure Suit Larry III

I've been wrestling with this leud little adventure for a while but I'm having trouble getting the combination for the lock on Suzi's locker in the sports club. I've made a note of the writing on the back of the keycard, but I'm still no further down the line.

Alan Higginbottom, Milton Keynes



Worms

This is a bit trickier than you might have hoped for, but here goes. Open the magazine which came with the game manuals. Search the pages until you find the adverts for the three firms listed on the back of the keycard. Take a note of each of the page numbers (making each one into a two digit number by adding a zero in front of any single page number). Now place the numbers together and you'll have the six number combination.

Legend of Kyrandia

I've made a fair bit of progress in the game: I've got all the rocks, a gold coin, two emeralds and I've just beaten Malcolm. However, now I'm stuck in the caves. Is it something to do with the Twilight Place?

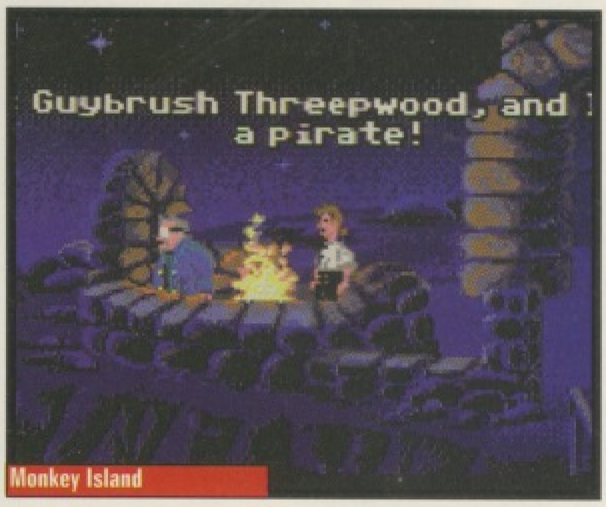
Richard Porter, Fife

It's the gold coin that will get you out of this situation. As this is quite an easy game and we wouldn't want to spoil it for you, let's just say "we wish you well". Think about it.

Police Quest III

I've spent far too long driving around trying to find the industrial estate, but then my map reading was never up to much. What's the secret?





Monkey Island

Terry Whitcutt, Leicester

This is a simple one. The industrial estate is on 325 South Second Street, as it says on the map!

Operation Stealth

Can you help me with Operation Stealth? I know it's a bit old, but I've just got back into adventure games and I found this at the bottom of my collection. I've got through the rat maze, tied up the guard, given the man water and swapped the security stamps, but I can't get up the fingerprint-controlled elevator.

Simon Dorf, Penzance

Your prints obviously don't work, so you need to find some that do. Go to the guard's shower room and pick up the empty glass. This has the guard's prints on it, which you can lift off with the aid of the cigarettes in your spy kit. First you'll need to empty the tobacco from the cigarettes, then use the paper to take a copy of the prints from the glass. You can then use the paper to activate the lift.

Monkey Island

Just when I thought I was cruising through Monkey Island (bad pun intended) the crew of my ship has turned against me. I've tried to please them but they just don't seem to want to listen or take orders. Do you have any tips for whipping them back into shape?

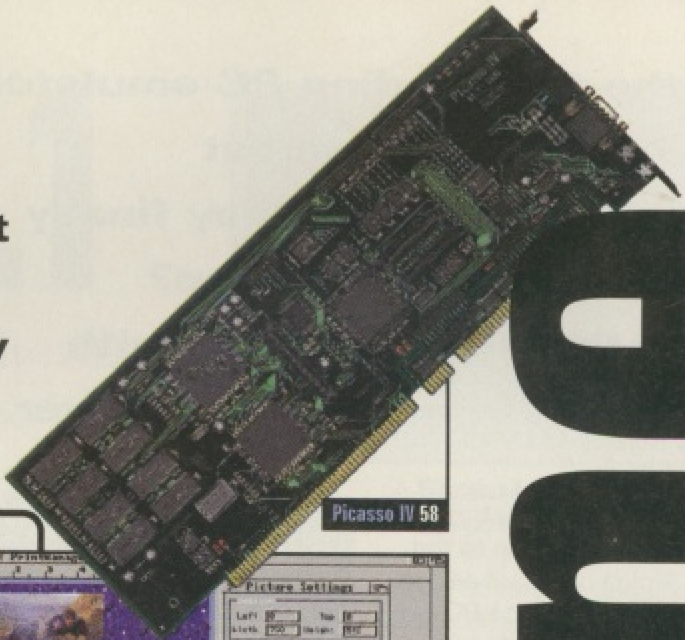
Nigel Hyde, Folkstone

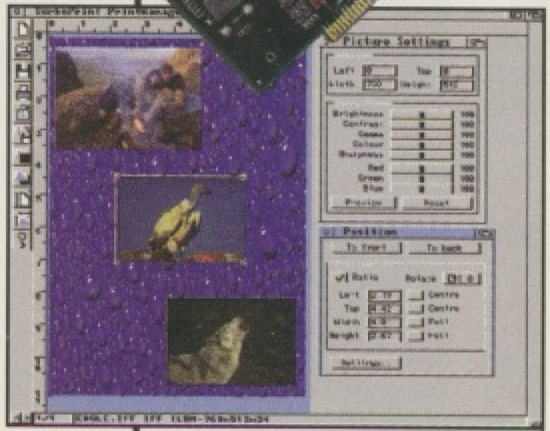
You could try going on a management course (they're the answer to everything, so I'm told). Otherwise, climb the rope ladder and get the flag. Go down into the hold and get the rope and fine wine from the chest. Pick up the kegs to get the gunpowder. Go to the galley, pick up the pot and open the cupboard to get the cereal. Open the cereal and inside you'll find a prize (a key). Use this to open the chest to get the cinnamon and the recipe. Go to the galley and use everything according to the recipe on the cooking pot. When you regain consciousness, use the business card Stan gave you on the fire, then get some more gunpowder. That should be enough for now!

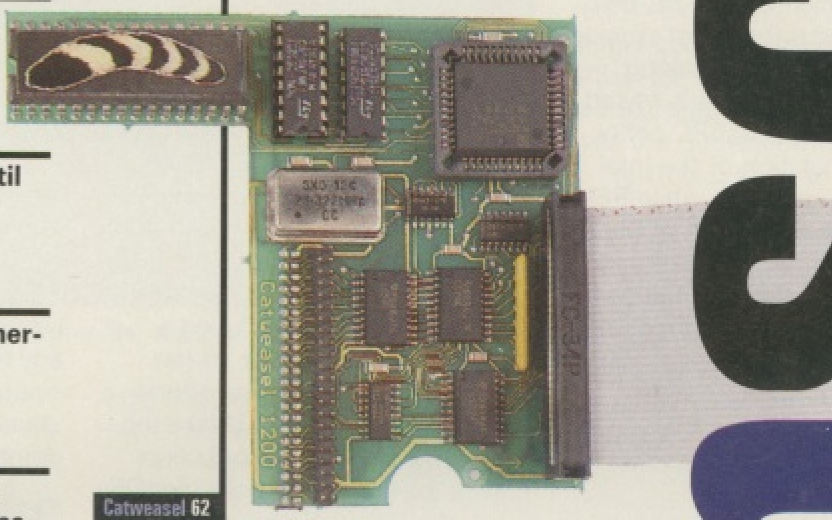
Tech Scene

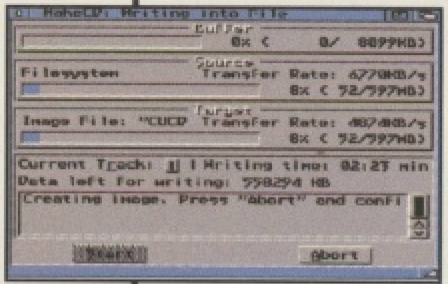


Depth isn't the word! We've put so much time into researching and testing this gear, you nearly got your magazine a week late this month! Go on then, get stuck in.


Picasso IV 58


Turbo Print 5 54


Catweasel 62


MakeCD 61


Art Gallery 72

With the two leading PC emulators recieving updates almost simultaneously, have they finally bridged the PC-Amiga gap? We put PCx head to head with PC-Task to bring you the answer.

PCx 1.1 VS

■ Price: £49.95 ■ Developer: Microcode Solutions
■ Published Worldwide: Blittersoft © 01908 261 466

No matter how strong your allegiance to the Amiga is, the sheer numbers of the PC computing world mean that it's just possible that you have a decent reason for needing or wanting to access PC files and programs.

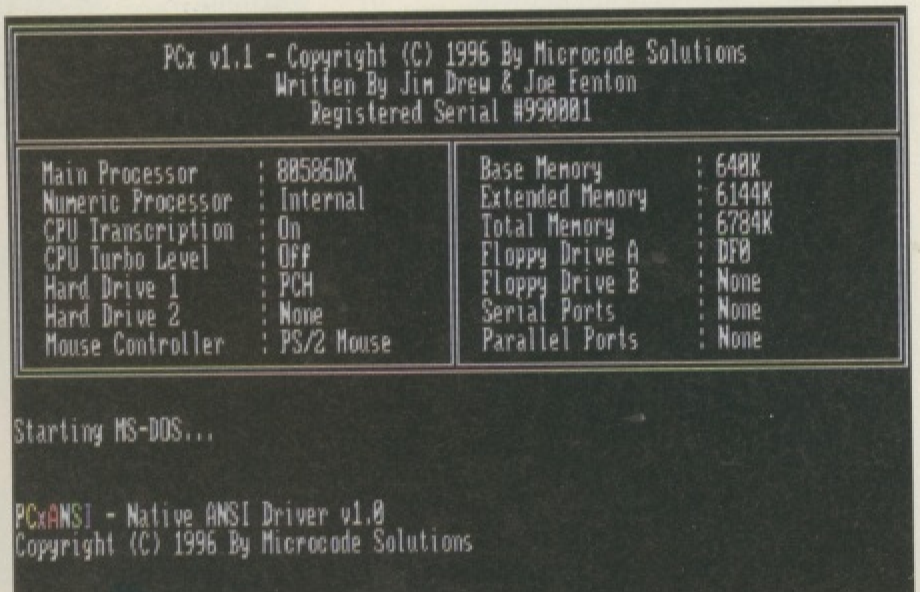
For years now, Amiga users have had recourse to CrossDOS to get painless access to PC formatted floppy disks, even PC formatted hard drives and removable media. But just seeing the data is one thing, doing something useful with it is something else entirely.

That's where PCx and PC-Task come in. They're the latest version of the Amiga's current leading edge PC emulators. PCx is based on the former Emplant PC code and offers emulation of the Intel Pentium instruction set while PC-Task 4.1 offers emulation of the 486 instruction set. More importantly, both have been optimized for speed using new methods of emulation where PC code is partially transformed into Amiga 680x0 code before being run, which can result in some major speed gains.

Stage setting

Traditionally, the PC has run using Intel processors, starting with the 8086 and 8088 and progressing to the Pentium and Pentium Pro chips. The PC's memory comes in an initial 640k block, followed by optional megabytes of 'extended' and 'expanded' memory, two different ways to address memory beyond the initial 640k barrier, which require different drivers just to get access to the memory. PCs use a variety of graphic cards to generate display – these days, graphics cards are of the "SVGA" variety, roughly comparable to (although often much faster than) the current crop of Amiga 24-bit display cards. But many PC programs, including the DOS operating system that is almost inescapable, still use old low-colour, low-resolution and text modes, more comparable to basic Amiga native video output.

The rough PC equivalent to the Amiga Kickstart is the BIOS, and both PC-Task and PCx provide a built-in BIOS. Emplant PC required users to obtain their own BIOS for a time, but PCx includes its own. PC-Task has always included a custom BIOS. However, to get anywhere, you'll need an operating system for the PC. Unlike the Amiga, where there is only one choice for the end user (AmigaOS 3.1 is the only real upgrade path), there are a few choices to make. The most obvious is to run Microsoft DOS 6 and, if you've got the system specifications to handle it, Microsoft Windows 3.1.



▲ PCx's boot screen. The rainbow colours are not the pinnacle of graphic design.



▲ Staflight II, a classic on any platform.

(Windows 95, the most recent Microsoft OS, is not currently supported by either emulator.) There are some alternatives, however. There were a couple of competing DOSes for the PC, namely PC DOS from IBM and DR DOS, now known as Novell DOS. DOS of any flavour is typically cheap since in this age of Windoze 95, a standalone DOS is not in high demand.

386, 486, P90?

What does it mean to you that PCx and PC-Task emulate different processors (the Pentium vs. the 486, respectively)? In truth, very little. As we'll see, the emulation speed on even the fastest Amiga does not really threaten fast 486 performance, let alone Pentium performance. The only real significance is that PCx's Pentium emulation would allow you access to a program which might have been specifically written for the Pentium – but again, not necessarily at Pentium speeds. The most notable recent examples are games that require the Pentium processor, but most of these also require features that neither emulator can offer, such as 3D accelerationor, the Windows 95 operating system.

PC-Task and PCx have similar minimum system configurations. But as with all emulation, the more raw horsepower you can offer, the better, particularly when it comes to resource-hungry PC emulation. You absolutely need a 68020, AmigaOS 2.04 or better, and 2–3 megs of Fast RAM. PC-Task can theoretically be run without a hard drive but PC emulation is extremely limited solely from floppies. A hard drive with a good amount of space free, preferably unpartitioned space, is essential for getting any serious work or play done. Furthermore, for PCx an FPU is recommended to allow access to the Pentium FPU instruction set.

My test system is an Amiga 4000T running with an 060/50 on a CyberStorm Mark II, with 32 megs of Fast RAM and a CyberVision 64/3D graphics board. No punches pulled here.

Both PC-Task and PCx are compatible with the 68060 processor. If you've been looking for an excuse to get an 060 accelerator, PC emulation is a pretty good one.

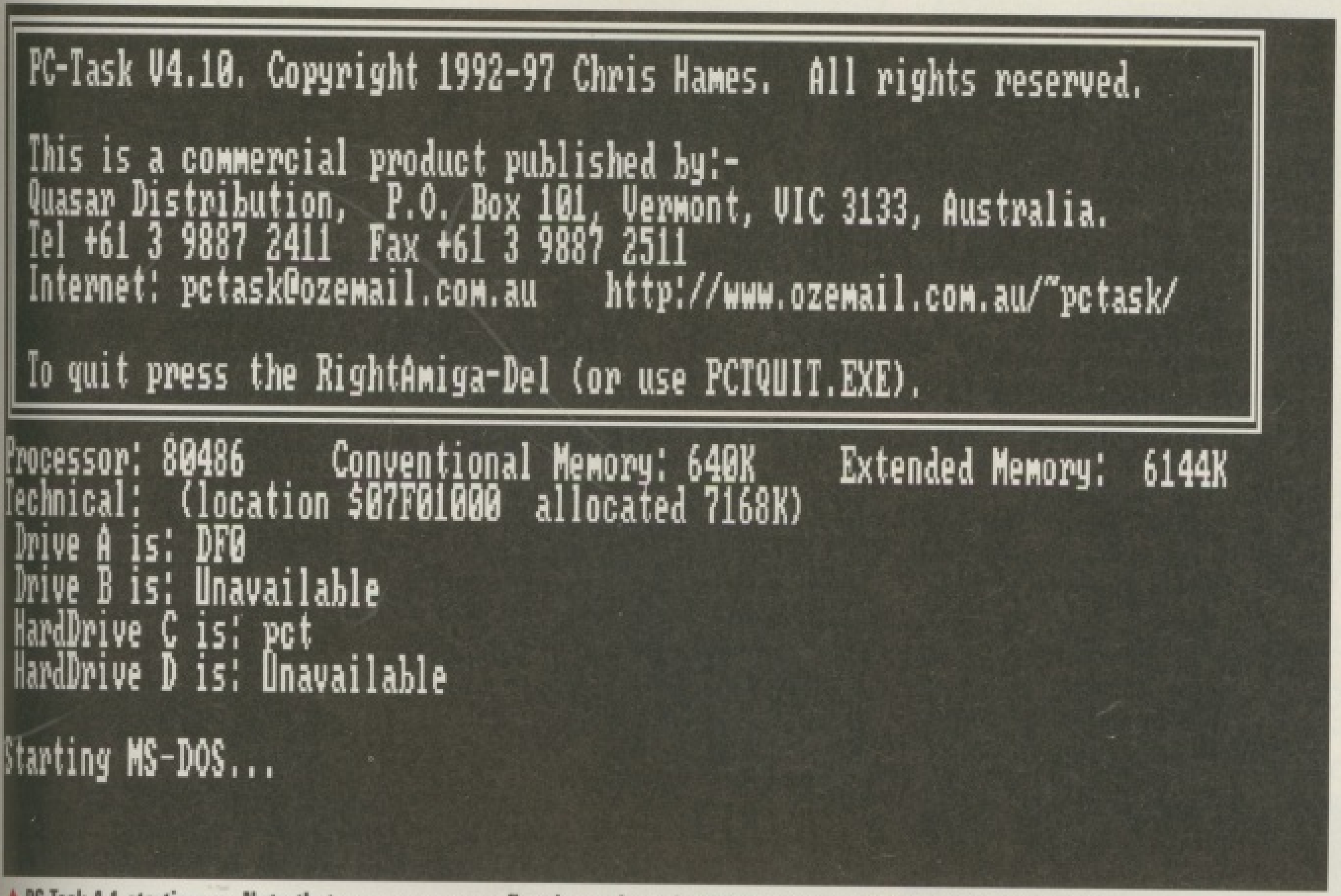
PC-Task and PCx both take advantage of the AGA chipset, which will give you access to the PC's 256 color VGA modes. Both emulators will also take advantage of graphic boards running common software such as CyberGraphX (recommended). However, as of writing this, PCx was far more limited in this respect, only allowing you to promote a single mode to a

PC-Task 4.1

■ Price: £69.99 ■ Developer: Chris Hames ■ Publisher: Quasar ■ UK Supplier: Wizard Developments ✆ 01322 527 800



▲ Wasteland should have been ported to the Amiga. Work around that problem.



▲ PC-Task 4.1 starting up. Note that you can use two floppies and two hard drive partitions or files simultaneously.

CyberGraphX screen, namely the 320x200x256 color VGA mode popular with a number of games, including Doom. PC-Task, on the other hand, allows you to set any of the many PC screens to display on your graphics card. PC-Task also allows you to promote to a Workbench window, best for show value or if you're running a text application that you need to keep an eye on.

Drive partitions

To set up a hard drive partition, you can go one of two routes. The first is the 'hardfile' system, seen in earlier incarnations of PC-Task as well as in the Emplant Mac and ShapeShifter Macintosh emulations. This creates a large AmigaDOS file, several megs in length (as big as you elect, up to a certain limit, usually around 32 megs). This is the easy way to go if you've already partitioned all of the space on your hard drives. However, it is also very slow, and you'll need to allocate a significant portion of your Amiga's memory to a hard drive buffer for the partition it's on just to get acceptable performance.

On the other hand, if you've got some unallocated space on your hard drive or don't mind the effort it will take to repartition your drive, you can assign a stand-alone hard drive partition to the emulators. This allows for much faster access times from within the emulators.

Not necessary, but HIGHLY recommended are either a high-density floppy drive, a CD-ROM drive, or both. The PC software that doesn't come on high-density floppies comes on CD-ROM, and it's very difficult to find PC software on double density these days. Whatever route you have to take, if you're serious about PC emulation you should really be armed with these two items.

What You'll Get

This is of course the tricky question. Presuming you meet and hopefully exceed the minimum specifications, you'll have a PC running on your Amiga, with whatever amount of RAM you allocate to it, ready to run your applications. (A note here: PCx requires memory to come out of a single contiguous block, and it's advisable that you use your fastest memory. In my case, this was the CyberStorm's.)

You'll first want to install a DOS, which will be somewhat time consuming, not necessarily because of the speed of the emulation on your system but because reading a high-density PC floppy on the Amiga is a slow proposition – already, reading high-density causes a 50% speed hit on the floppy drive, and the PC data reads a bit slower than Amiga data.

Once that's done, the PC world is your oyster, albeit not a 100% compatible oyster. PCx and PC-Task do not claim to be fully com-

PC emulation

To make PC emulation tolerably fast, both programs use advanced emulation methods. In PC-Task, you choose between two versions of the program: PC-Task Dynamic and PC-Task Interpretive. The latter works as older versions of the program did, taking PC instructions as they come, translating them to work on the Amiga, then translating the results back. Reliable, but slow.

Dynamic recompilation buffers a certain amount of code and changes larger chunks at a time into 68000-series code. This is faster in the long run but takes up more memory (you can assign a cache ranging from 512k in size to a large proportion of your PC system memory) and results in programs that are slower to start up (as they are cached and converted.)

PCx has two methods – a 'transcription' mode similar in concept to PC-Task's 'dynamic recompilation', but with a cache maximum of 1 meg, and a 'Turbo Level'. The Turbo option is hardly explained at all in PCx's manual, they simply tell you that setting it to '1' or '2' may get faster emulation for certain enhanced/protected mode DOS programs. (Levels 3 through 7 on the slider are not documented.)

All of this sounds wonderful, doesn't it? The bottom line is this: Yes, the transcription and Dynamic options do typically get you faster emulation, although you are notified in the manuals that it may actually slow things down. Just keep this in mind and don't be afraid to experiment.

patible with every piece of software, and if you play around long enough you're sure to find some instances.

Nevertheless, you do have a number of options open to you. Windows 3.1 will install, with some coaxing, and you can even get the Mother of All Utilities, Microsoft Word 6, to run on both emulators if you've got enough memory and patience.

In practice

I've found that the emulations both do a comfortable job of recreating a decent 386-class PC in terms of real-world usability. 3D texture mapped games are not overly comfortable even on an 060 such as mine. However, the Bullfrog classic Populous II ran quite admirably compared to a 486/25 and Pentium 100 I've seen it on. PCx's enhanced ANSI text mode means you might get some actual speed gains when running something akin to Lotus 1-2-3 for DOS, which while uncomfortable to use from a user interface standpoint, still has a very comprehensive set of statistical tools available for it.

In general, these emulators, on a high-spec Amiga, do a good job of getting you near the speed class of a somewhat average PC of the early 90s. Once you start playing with software expecting a fast 486, you'll be sorely disappointed, and those of you with Amigas slower than fast 040s will have to similarly downgrade your expectations.

Speed benchmarking proved to be a difficult proposition. It was a challenge to find benchmarking software that would run on a real PC *and* both emulators.

Benchmarks are also notoriously inaccurate when it comes to emulators, particularly those which have to emulate other processors. Most disappointing was PC-Task's inability to run the BYTEmark, a respected standard. (It returned values of '0' for tests.) PCx clocked in at something like 1/9 the speed of a Pentium 100, not bad, all things considered.

To form a benchmark comparison between PC-Task and PCx without using one of the benchmarks 'recommended' by either developer, I was forced to retreat to an old and somewhat primitive benchmark known as CI 1.1. This returned results indicating that PC-Task and PCx were roughly equivalent to 36.2 and 31.1 mhz 386es, respectively, in PC-Task Dynamic and PCx with Transcription. Using PC-Task Interpretive and PCx without transcription dropped each benchmark by about a factor of 5. Activating Turbo for PCx garnered a somewhat higher speed rating.

However, I prefer real-world tests. I can share my own experiences with you: displaying VGA.FLI animations is slightly smoother under PC-Task while some games seem more responsive under PCx. For a quantitative measurement, I compared the time it took for PC-Task and PCx to ZIP a file, compared to a real Pentium 100. Zipping a test executable on a Pentium 100 with a high-speed IDE interface took all of 1.83 seconds. PC-Task Dynamic clocked in at 9.63 seconds, a respectible result by comparison. PCx, on the other hand, using transcription, took 34.51 seconds, over 15x more than the Pentium and more than 3 times longer than PC-Task, using the same PC configuration!



▲ You can't call yourself a true RPG player if you've never experienced the Wasteland!

Conclusion

If you set about PC emulation with a well specified Amiga and some realistic goals in mind, both emulators will, in the long run, deliver for you. PC-Task reflects the many years of continuous development it has had while PCx at times shows the chequered road it has travelled to get to us to today. If it wasn't for PCx's shortcomings, most of which involve I/O devices, I might be able to make a recommendation in its favour, but as long as PC-Task continues to be the more accessible emulator, in terms of user friendliness, flexibility, and file sharing, I have to reserve strong judgement. ■

Jason Compton

Head to head

It's really very hard to come to a conclusion on these emulators. Not only is there such a variety of software on the PC that it defies a thorough inspection, it's not entirely clear who comes out on top here. There remain some other points and comparisons to be made though:

CD-ROM: While both offer CD-ROM support, both implementations seem to be lacking in 100% compatibility. CDs which are recognized both on real PCs and by my Amiga's CD filesystem were sometimes rejected as invalid by the emulators. PCx was the biggest offender here, choking on a number of CDs.

SOUND: Both packages offer emulation of the standard PC speaker, but PCx has gone an extra mile and implemented a partial SoundBlaster emulation. While not complete or perfect, it's usable for certain games.

MOUSE: Both emulators offer mouse emulation. PC-Task's is still the easiest to use, as it has a built-in driver. PCx leaves you to locate your own.

MANUAL: Only PC-Task comes with a printed manual. PCx has an AmigaGuide on the disk. PC-Task's is far more comprehensive, while that of PCx leaves a number of options and features poorly explained, the most notorious of which is the Turbo slider which could do anything for all we know.

FILE SHARING: Only PC-Task allows you to access the PC's drives through AmigaDOS. This can be quite useful if you're using the Amiga to download PC software and don't want to have to transfer it through PC floppies. PCx is incompatible with PC-Task's partitions, but will work with PC-Task hardfiles.

PRICE: PCx is £20 cheaper than PC-Task.

MULTI-TASKING: PCx does not allow you to run multiple simultaneous tasks of the emulation, PC-Task does.

PC TASK 4.1

A500 · A500+ · A600 · A1200 · A1500 · A2000 · A3000 · A4000

system requirements: Any Amiga with 68020, OS 2, 3 Mb RAM. Faster processor, hard drive, more memory and graphics card recommended.

ease of use.....90%
The PC isn't the friendliest, but PC-Task does make it relatively easy to get what you want.

performance.....83%
Some applications slower, some faster, but easy to get a hold of.

value for money.....90%
£20 may seem like a big difference, but I think I'm right about this.

OVERALL
Not the resounding winner, but still the better package.
89%

PCX 1.1

A500 · A500+ · A600 · A1200 · A1500 · A2000 · A3000 · A4000

system requirements: Any Amiga with 68020, OS 2, 4 Mb RAM. Faster processor, hard drive, more memory and graphics card recommended.

ease of use.....80%
I know they think their manual is enough. It's not.

performance.....85%
For the things you're likely to wind up doing PCx often has a slight speed edge here.

value for money.....85%
£50 for a PC is a good deal, but you're missing out on some goods features.

OVERALL
It's not there yet, but PCx could be the way to go.
86%

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- ....AmFTP
  [INDUSTRY STANDARD FTP CLIENT]
- ....AmIRC
  [INDUSTRY STANDARD IRC CLIENT]
- ....AmTelnet NEW
  [TELNET CLIENT - AMFTP AUTHOR!]
- ....AmTalk NEW
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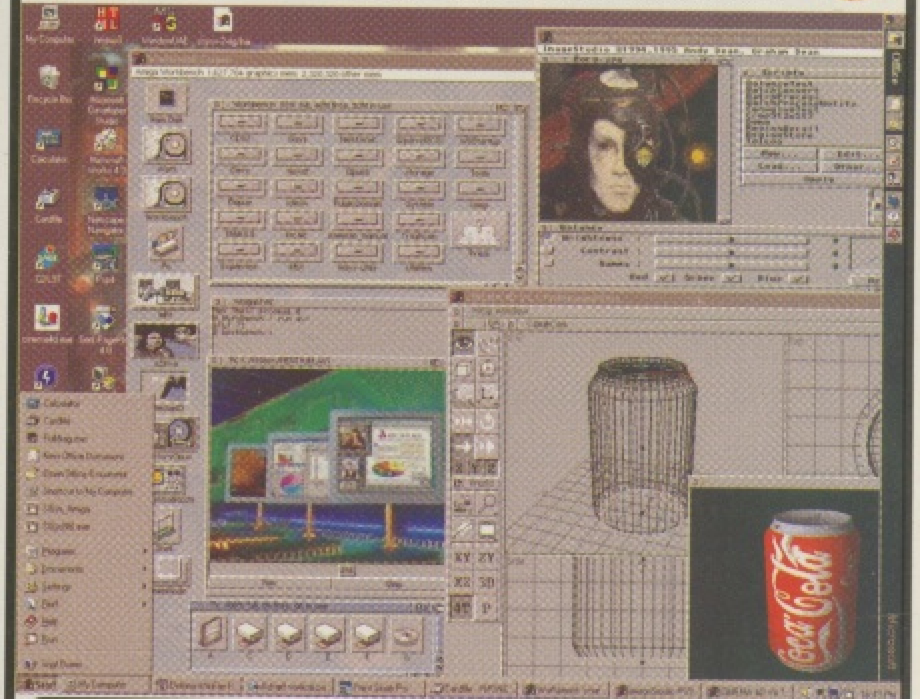
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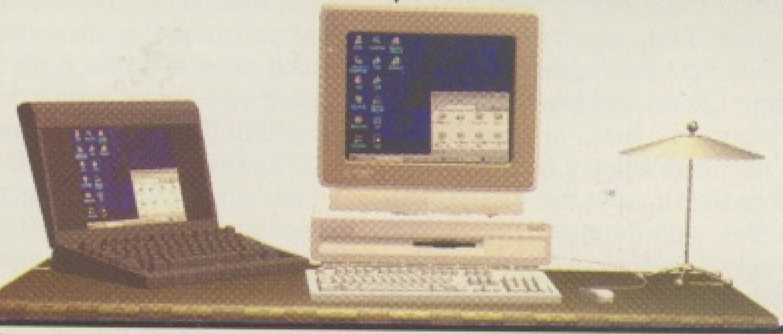


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Turbo Print 5

AMIGA MAGAZINE SUPERSTAR

■ Price: £49.95 ■ Developer: IrseeSoft ■ Supplier: Wizard Developments © 01322 527800

The photo-realistic printers now available demand drivers to match, and Turbo Print is just the job.

Printers are getting sexier as each year goes by and although the standard Amiga printer preferences functions continue to stand still, there are some publishers like IrseeSoft who keep coming up with ways of making sure the Amiga doesn't get left behind when it comes to printer output.

IrseeSoft, in case you don't know, are the people behind TurboPrint 5, a package so good that the quality being emitted from my Epson Stylus 600 is almost as good as that from my PC. I did say almost as good, but I'm sure I'll be able to change that to "as good" when IrseeSoft update the printer drivers in version 5 to support the latest Epson 600. It already supports the latest Canon and Hewlett-Packard printers.

TurboPrint 5 is a print enhancement package on the Amiga, one of two, with the other being Studio II Professional which is now up to version 2.14. The TurboPrint 5 package is made up of three main components: printer drivers, the printer preferences panel and a picture printing application called the Graphics Publisher.



▲ The Graphics Publisher supports data caching so you don't need lots of memory.

Do you need it?

Let's look first at why you need a printing enhancement package. The printer drivers and printer preferences functions on the Amiga have not changed since the days when 4096 colours was a revolution in home computers. These days, 24-bit is the norm and new printers like those from Hewlett-Packard, Epson and Canon, are now capable of producing photo-realistic imagery.

Unfortunately, the Amiga doesn't come with printer drivers that will drive these new printers. Nothing really wrong there because even my version of Windows 95 doesn't have the latest drivers. The difference is however, that printer manufacturers just don't see the point in developing drivers for the Amiga while they do however, create drivers for PC and Macintosh owners.

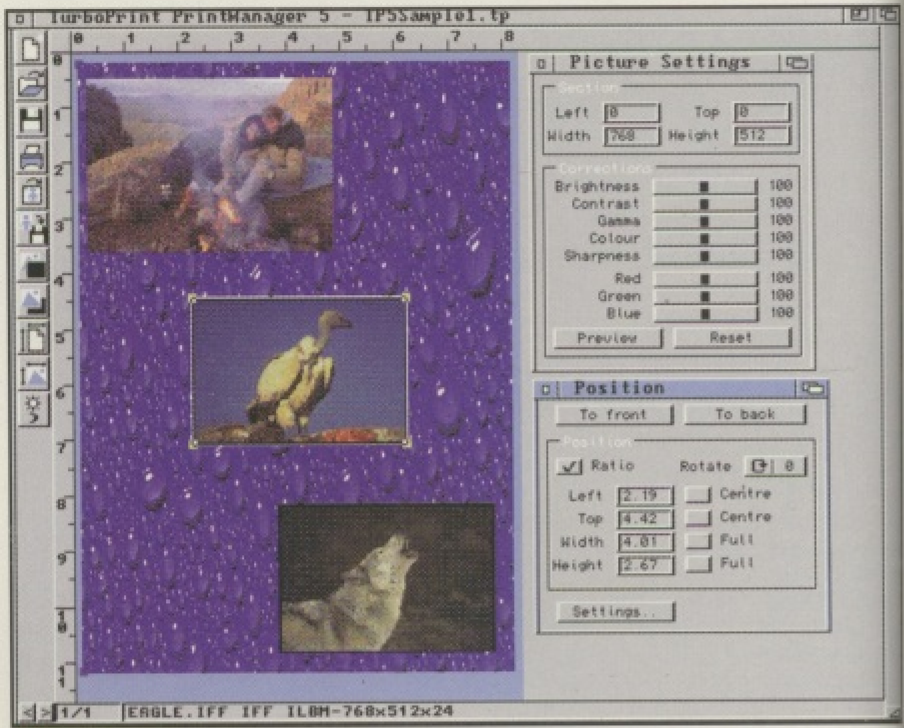
The reason is money. Only one manufacturer I know of actively develops Amiga drivers (Canon) and even then the free driver you get is not fully functioning. Also you need to get the upgrade from the author for what is not a very large sum of money (£20).

So, in the main, it's down to third parties like IrseeSoft to develop new printer drivers so that we can use the latest printers on our Amigas. The printer driver alone though doesn't solve the whole problem.

Turbo Prefs

Hand-in-hand with a printer driver comes the ability to control the output, and for that you need a set of preferences for changing colour balance, resolution, paper size and so on.

The standard Amiga preferences for this are nothing more than a joke. Ancient, old fashioned and definitely useless. Preferences on the Amiga also serve a printer device that is equally useless, being restricted to 4096 colours or 12 bit. We need 24-bit and that's where TurboPrint comes in.



▲ The Graphics Publisher enables you to have more than one image on a piece of paper. As well as adjusting the position of the images, the colour balance can also be changed.

Why do we need 24-bit? Well, let's take printing a gradient which is where most applications come undone. A gradient can have up to 256 shades of a colour but the printer device only supports 16 colours for Red, Green and Blue, (16x16x16=4096). This is why the printer device is near to useless.

Unlike Studio II, which performs miracles in working with the Amiga printer device, TurboPrint comes with its own preferences serving their own 24-bit printer device. This means the program is in effect patching the system, but as it seems to work so well these days, I don't think anyone really cares how it does it, so long as it comes up with the goods, which it does.

Picture Perfect

The upshot of having its own printer device is that Turbo Print can output in 24-bit from its own picture printing application (Graphics Publisher).

The Graphics Publisher is supplied so you can print bitmap based pictures. Basically, anything you can produce will be re-produced in all its glory if you use the Graphics Publisher. This is because the Graphics Publisher is printing direct to its own printer device and is not reducing the number of printed colours, which is what most normal Amiga applications do.

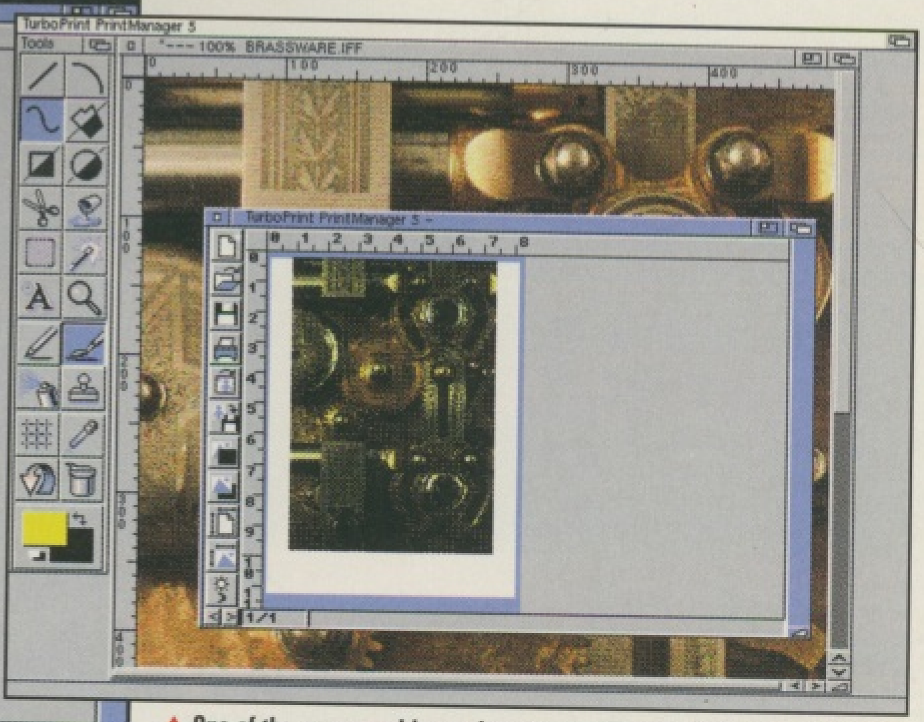
What makes the Graphics Publisher different from previous

Upgrading from 4.1

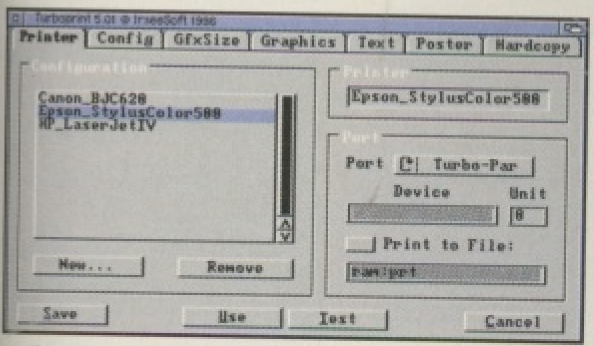
We've had quite a number of people asking if it's worth upgrading from TurboPrint 4.1 to version 5. The answer depends on a number of factors which I'll outline now. Version 5 comes with new drivers and so if your printer is not yet supported in 4.1 but is in 5, then upgrade. If you print lots of pictures, and regularly have more than one on a page, then the Graphics Publisher will be very useful. Other than that, there isn't a great deal different between versions except for some tweaks here and there.



▲ Pictures in the Graphics Publisher can be cropped like this and then resized.



▲ One of the programs I know that supports TurboPrint 5 is Art Effect from Haage & Partner.



▲ If like me, you have more than one printer, you can have a number configured and ready to use.

versions (in Turbo Print 4.1 for example) is that you can now place more than one image on your paper and print them all at once. Previously with the Print Manager, you had to print one image, and then if you wanted another on the same piece of paper, feed the paper through again. Now it can all be done in the one go. You can even crop images in the Graphics Publisher.

This makes the Graphics Publisher very important to those who want to produce images with lots of colours (such as gradients and so on) because these types of images can not be printed very well from most Amiga applications. The exceptions are newer and more advanced applications like Art Effect that can be made to print directly to Turbo Print 5 (or in the case of PageStream 3 and ImageFX, Studio II Professional).

Colour Reduction

Which leads me to Printer Preferences and why you don't get the same quality from a normal Amiga application that you do if you print the same image from Turbo Print's Graphic Publisher. Unlike the PC or Macintosh, where it doesn't matter what application you print from, on the Amiga, if you have a page which is graphics intensive, the best results are produced when the page is printed in 24-bit.

Most Amiga applications have only ever known a 12-bit printer device and so when the page is printed, the number of colours is reduced with some applications dithering to hide the colour reduction. In the main however, if you print a gradient from Final Writer or Wordworth (or from many other applications), it will come out contoured (visible steps between colours) while if you do the same thing in Graphics Publisher, it will print with smooth graduations.

This is why TurboPrint 5 is so important, because it gives you the ability to not only drive your modern printer, but also gives you two options for output: one from your normal application, where the quality is much improved over what it would be without Turbo Print 5 (but still not perfect because of the application, not Turbo Print), and for optimum quality, you have the Graphics Publisher.

What is encouraging is that more and more programs are starting to directly support one or both printing enhancement packages as well as the normal Amiga preferences. I know for example from discussions with the authors, that DrawStudio will have 24-bit printing in its next version, while Photogenics 2 and Art Effect already do.

Which leaves me to urge anyone who is buying a new printer to buy either TurboPrint 5 or Studio II. Of the two, my own view is that Turbo Print is easier to use, a view reflected by many CU Amiga readers. Whether it's changing the dither, the colour balance, or the position of an image on your paper, using Turbo Print is very intuitive.

It's also very quick. A full A4 page printed at 720 dpi (Stylus 600) from a 68060 Amiga took only six minutes, slightly longer than it took from a PC. Combine this with a new ink jet and you'll be in heaven. ■

Larry Hickmott

Supported Printers

Brother 24 Pin & 9 Pin
Canon BJ 210, 240 (inc Photo Cartridge), Canon BJC-4000, BJC-4200 inc Photo Cartridge), BJC-600, BJC-600e, BJC-610, BJC-620, BJC-70, 800, Canon LBP Lasers, Canon PJ108A
Citizen 120D, Printiva 600C, Swift 24, Swift 240, Swift 9
Epson EX, LX, & FX series, LQ, SQ, Stylus 820, Stylus Colour, Stylus II, Stylus IIs, Stylus 200, Stylus 500, Stylus 600 (no driver - use 500)
Fargo Primera, Primera Pro, FotoFUN
Fujitsu DL-100
Hewlett-Packard DeskJet 500, 500C, 520, 540C, 550C, 560C, 600C, 660C, 690C& 694C (Inc photo cart), 850C, 870CXi
Hewlett-Packard LaserJet II, III, IV (L and P Models), V (L and P models)
Hewlett-Packard PaintJet, PaintJet XL, PaintJet 300XL
Lexmark ExecJet IIc
Mannesmann Tally 7400
NEC Pin Writer
Okimate 20, Oki ML-38x, Oki ML-39x
Panasonic KX-P1124, Panasonic KX-P1540
Seikosha 24 pin, 9 pin, SLY80AI, SL-80I
Star 9 Pin, LT, XB-24, LC-10, SJ-144



TURBO PRINT 5

A500 · A500+ · A600 · A1200 · A1500 · A2000 · A3000 · A4000

system requirements: Workbench 2.04 or higher, hard drive recommended

ease of use 96%
Comes with a two part manual but I found I didn't need it. Very intuitive.

performance 94%
Very quick. Speed depends on printer and Amiga processor. Turbo Print 5 is also packed with useful features.

value for money 88%
Not cheap but it does its job so wonderfully we have to be thankful for it.

OVERALL
A superb way to produce stunning output. The best yet!
93%

Picasso IV

■ Price: £299 ■ Developer: Villagetronic ■ http://www.villagetronic.com
■ Supplier: Blittersoft © 01908 261466 ■ http://blittersoft.wildnet.co.uk

CyberVision may have stolen its thunder, but the Picasso IV graphics card could well be the best ever.

The Amiga's most popular Zorro II graphics card must surely have been Villagetronic's Picasso II. The success that it enjoyed kick-started the market for third party graphics cards for the Amiga. Like other cards of the era such as the Retina and GVP Spectrum, it was based on the PC SVGA Cirrus Logic 5426 chip. After a long break from Amiga development, Villagetronic have finally released the successor in the form of the Picasso IV.

There's quite a few major additions to the Picasso IV functionality wise. Firstly, it's a dual Zorro II and III autosensing card. That means it's significantly faster on A3000 and A4000 machines but still works in the A1500 and A2000. Probably the most impressive feature, however, is the addition of a flicker fixer into the design as standard. Since the Picasso IV requires a video slot in an A3000/4000, there's no extra loop-through cables. It's just plug in, connect to any SVGA monitor and absolutely every Amiga display mode from the new Picasso modes to the most hack-some AMOS hardware-banging game, will display perfectly.

Flicker fixing

The flicker fixer negates the need for a multiscan monitor. The A2000 doesn't have a video slot in line with a Zorro slot but Villagetronic have come up with a unique solution. The PCB around the video slot section of the card is perforated. That's right, you can actually snap off a segment of PCB and plug it into the video slot. The jumpers provided then connect with cables to reunite the video slot to the Picasso IV. Scary stuff but it actually works providing you're careful.

Physically the card is far busier with silicon than Phase 5's much smaller and less populated Cybervision 3D. It's also bristling with jumpers and feature connectors. A new Pablo video encoder is planned for the card as is an MPEG decoder board. These additions would be fantastic if they arrive but from past experience, manufacturers rarely see it as worthwhile to release them.

You don't stick a £300 card in an Amiga for a flicker fixer alone. What we really want is the new high resolution and high speed display and it's in this area that the Picasso IV excels. Opting to stay with the Cirrus range, rather than the S3 'ViRGE' chip set as used on the Cybervision 3D, a much later 64-bit 5446 is used for the Picaso IV. Coupled with 4Mb of EDO (Extended Data Out) RAM as standard, the Picasso IV is quite capable of driving absolutely outrageous resolutions up to 1600 x 1200 pixels in 16-bit (65,536 colours). Whether your monitor can handle that is another issue, but it gives you one hell of a display that just doesn't compared to AGA modes.

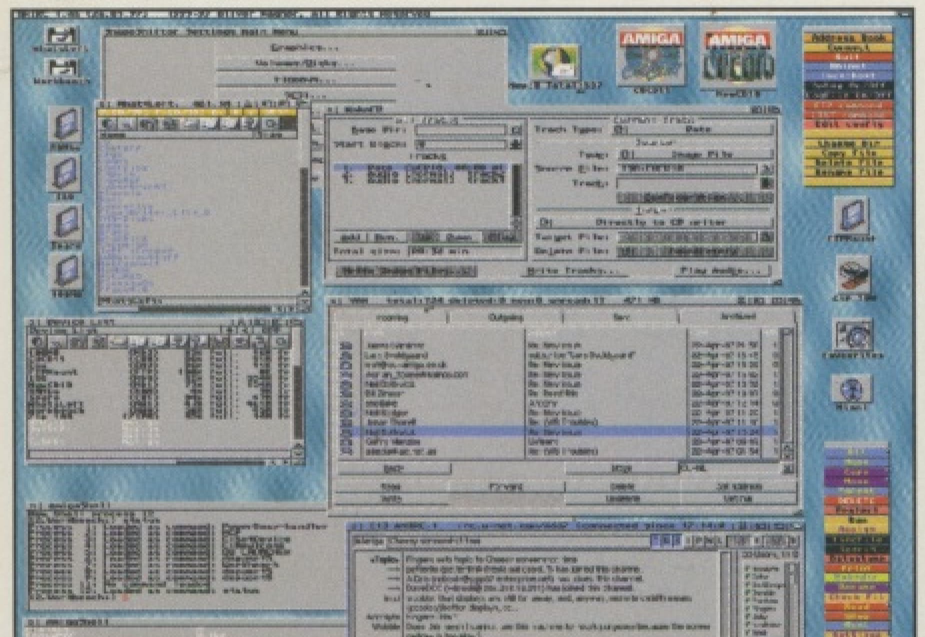


▲ Impressively loaded Picasso IV, in all its full Zorro III video slot glory

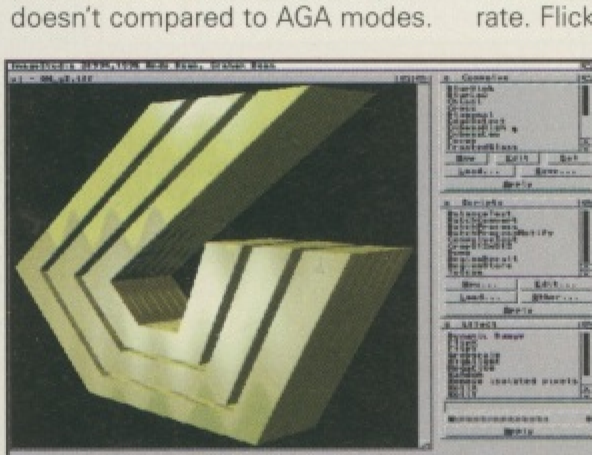
Scan rate

Sadly, even the Picasso II's older chip-set shows up AGA for computer displays (rather than video). An 800 x 600 256 colour screen zips about, faster than a much smaller and less colourful AGA screen. You also have the luxury of not tying up the Amiga's custom chip-set DMA with Multiscan Productivity or DBLPal, slowing everything to a crawl. A much underrated boon of a graphics card is an increase in the scan rate. Flicker lessens and eye fatigue is reduced. Take it from someone who works in front of a computer all day, the Amigas 50Hz is NOT good for this.

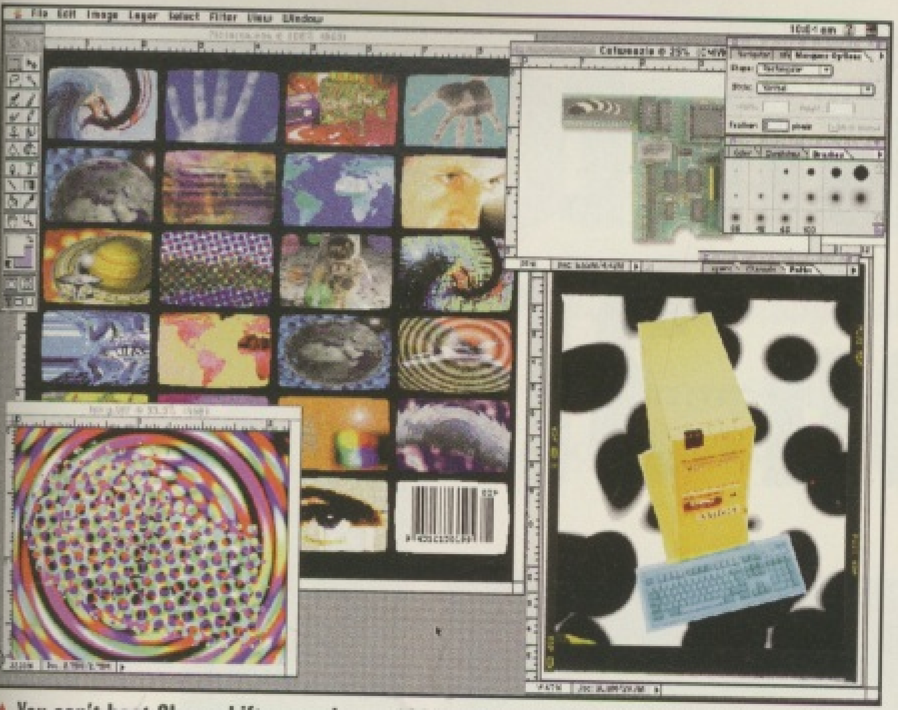
The Picasso IV's display is more of the same but better. It's so much faster that even an old graphics board crony would find it a massive improvement over the older non-64 bit generation. It's even faster than the older card's 8-bit modes while in 24-bit!



▲ Workbench in 1024 x 768 allows far more windows and activity on the screen than ordinarily possible. It's a lot faster than AGA too.



▲ Image Studio is happy to run on a truecolour screen so that the previews aren't limited to 256 colours.



▲ You can't beat Shapeshifter running at 1024 x 768. A colour display is barely practical with Mac emulation unless you have a graphics board. The Picasso IV is just the ticket.

I tended to use 16-bit displays which are outrageously quick but so colourful as to be nearly indistinguishable from 24-bit.

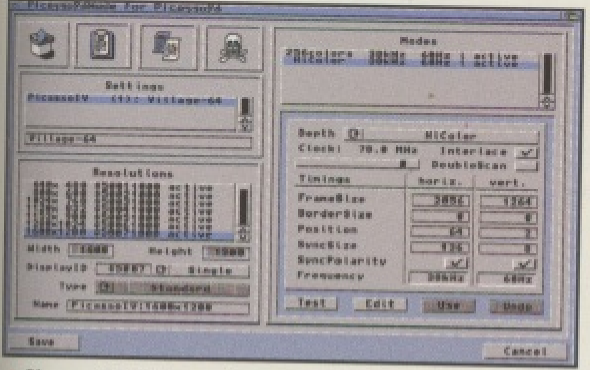
It's about now that we get into the real crux of the matter when running a graphics card; the all important RTG (ReTargettable Graphics) software which wedges into the Amiga's operating system to add new screenmodes and to redirect graphics onto the new card. For a long time the standard was Phase 5's CyberGraphX RTG software, the most strongly developed RTG software with drivers for cards provided with lesser RTG software. It's been so popular that it IS more or less an RTG standard for the Amiga which makes it such a surprise that Villagetronic decided to go it alone.

Picasso 96

The software provided is known as Picasso 96. Out of necessity for the situation with Amiga software, it sports a high degree of compatibility with CyberGraphX software, so much so that the bulk of the CyberGraphX software I use from day to day functioned perfectly. ImageFX, Image Studio, Voyager-NG, IBrowse, Cybershow/view/grab etc. It isn't just compatible, it's actually better in many respects. It astounds me that it seems virtually bug-free given the hideous state of Phase 5's CyberGraphX 3 re-write when we looked at the CyberVision 3D a couple of months back.

What's more, my major complaints about CyberGraphX have been addressed in Picasso 96. The screenmode editor, called Picasso 96 Mode is a case study in what such a tool should look like, unlike the amateur effort in CyberGraphX. There's also the matter of screen-swapping. Unlike the Amiga's native chip-set, swapping screens doesn't just require changing a pointer to somewhere else in memory. You have to shovel the entire display in and out of the card. Perhaps it's also due to up-spec hardware but screen-changes happen in a fraction of a second and not two whole seconds like my GVP Spectrum. It's worth noting that CyberGraphX 3 was also much quicker on the CyberVision 3D but nowhere near the Picasso IV's swap rate.

There were some minor problems though. Some old software like Iconian crashed with no explanation although it was fine on CyberGraphX. Cygnus Ed, the famous text editor, didn't erase block-marked text, rendering the package quite frustrating to use. PowerSnap refused to work at all. Otherwise, everything was perfect but I'm sure other glitches will appear.



▲ Picasso 96 Mode: an improvement over CyberGraphX Mode to say the least. Now why aren't they all this good?

I was dubious whether a newcomer could appear onto the market to usurp CyberGraphX but Picasso 96 appears to have done just that. The CyberGraphX authors totally re-wrote the software, introducting a lot more bugs. Seemingly the only reason for this was to implement the OpenGL standard to show off the 3D capabilities of the CyberVision 3D. There's also rumours of a low-level backdoor in Picasso 96, which will allow ultra-high speed access to the hardware for emulation software such as the forthcoming Fusion Macintosh emulator.

Benchmarks

800 x 600 pixel 256 colour screen

Test	CV3D	Picasso IV	Winner
Put Pixels	2664177	1195250	2.23 CV3D
Drawl Lines	142294	27505	5.17 CV3D
Draw Hor/Ver	200495	267704	1.33 PIV
Draw Circles	86498	102269	1.18 PIV
Draw Ellipse	79692	79515	Even
Draw Boxes	7012	13481	1.92 PIV
Scroll X	1309	2415	1.85 PIV
Scroll Y	1298	2328	1.79 PIV
Print Texts	48270	27256	1.77 CV3D
CON: Output	739	1371	1.85 PIV
Open Windows	274	303	1.11 PIV
Size Windows	530	560	1.05 PIV
Move Windows	87	123	1.40 PIV
Swap Screens	46	592	12.5 PIV
Areafill	29500	520	56.7 CV3D

The results are extremely interesting. In most tests the Picasso IV and Picasso 96 software combination were an average of 35% faster. However the CyberVision 3D/CyberGraphX3 combination shows impressive accelerated Draw Lines and Put Pixels performance with astounding Areafill results. The Picasso IV was far faster for screenswaps. In general use, the Picasso IV subjectively felt a bit faster but in reality, fast is fast.

Picasso IV card

I'm pretty impressed with the Picasso IV card, the combination of very nice and fast hardware and excellent software make it a fantastic expansion for any Zorroed up Amiga. There really is nothing like a graphics board to drive lovely high resolution, high colour screens for the wealth of top notch Amiga graphics applications. The Picasso IV's faultless flicker fixer ensures that naughty applications and games wont be left in the dark on your brand-new 17" SVGA monitor.

The Picasso IV sports some other neat features like the S-Video ports and audio In/Out 3.5mm minijacks. The great thing about this is that audio can be input to the Picasso to be mixed with the Amigas standard audio. There's a little utility provided to switch the inputs as needs be. Passing the output of a third party 16-bit sound card into the Picasso IV also would be a great idea.

The Picasso IV's electronically PCI-compatible expansion connectors promise MPEG decoders, video-in-a-window and video PAL encoder modules for the future. It's that simple; if you've got a Zorroed Amiga and you're serious about your computing, get a Picasso IV. ■

Mat Bettinson

PICASSO IV

A500 · A500+ · A600 · A1200 · A1500 · A2000 · A3000 · A4000

system requirements: Any Amiga with Zorro II or III slots.

ease of use 95%
Dead easy hardware and software installation.

performance 96%
Blinding video performance and a flicker fixer to boot.

value for money 88%
It's expensive, but you get a lot.

OVERALL
Quite simply the God of graphics cards. **94%**

Continued overleaf ▶▶▶

A new look at Cybervision 3D

Time for a second look at the new improved CyberVision 3D graphics card from Phase 5.

Our review of Phase 5's Cybervision 3D graphics card created quite a stir. Opinions ranged from those totally unhappy with the card to those who thought it was the best thing since sliced bread. The fact is, although at the time every effort was made to sort out some of the problems, the product simply wasn't to our satisfaction.

However, since then the CyberGraphX V3 software has improved no end. Many of the previous incompatibilities have gone away and performance in some areas has improved also. It's now back up to the same high standard as the previous CyberGraphX version 2. Unfortunately the 800 x 600 16-bit bug still plagued the CV3D. We have yet to have it confirmed but it seems this is a hardware bug of the ViRGE chipset itself.

No 16-bit

Oddly the 3D ViRGE demos run in 16-bit and obviously they work on a lot of configurations out there. They don't work for us. We even tried tweaking the screen mode scan rates significantly in all areas but still the CV3D output nothing but a black screen. This is a singularly annoying feature since we find 800 x 600 16-bit is the most useful screen mode for a 17" monitor.

We re-installed the software from scratch on another machine, installed the latest update, but still the problem would not go away. As such we advise that you request the right to return the CV3D if this screenmode does not work for you.

Previously the screenmode editor software, which has been improved slightly since we reviewed the package, placed restrictions on the scan rates and pixel clock that could be set on the CV3D. These were taken directly from the S3 ViRGE specifications. Now Phase 5 have given CGXMode the capability to enter an 'advanced' mode so that these limitations aren't there. It rapidly becomes apparent that the ViRGE can do more than the specs, very useful for defining an 800 x 600 24-bit screen in a good 70Hz refresh rate, unlike the flickery 50Hz default.



▲ Here's Helena Christensen casting an eye over Osiris, CGraphX's MPEG player.

Price reduction

Also big news on the CV3D front is the massive reduction in price in the UK. Phase 5 will have set up another UK distributor by the time you read this. Wolf Dietrich of Phase 5 assured us that the price of the CV3D should be around £175. Even with the separate scan-doubler at £75, the combo will sell for some £50 cheaper than the Picasso IV.

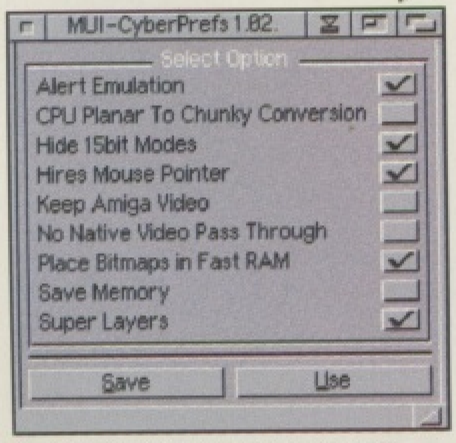
The support software with the CV3D has improved also with the promised OpenGL 3D library system having been completed and included with the new software. It remains to be seen if third party developers take up the ball with OpenGL on the Amiga. If so this could be the beginning of an Amiga 3D standard so that the Amiga can benefit from 3D hardware acceleration for games and applications alike. Only Phase 5 seem to have given this aspect any thought whatsoever, let alone completely develop a 3D library. Ports of OpenGL applications on other platforms are a distinct possibility. There's now another software MPEG player provided also – it seemed identical to the last one minus the bugs to us. Good news.

With fixed software, extra support material and a price reduction on the Cybervision 3D, the Picasso IV doesn't have the edge that it would if compared to the initial CV3D release. The Cybervision 3D is an excellent fast graphics card with high quality software support. This makes it excellent value for money and I can now recommend it most highly. ■

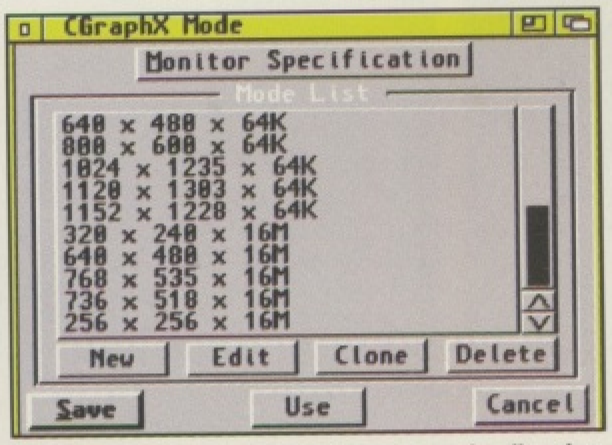
Matt Bettinson



■ Seen here is the cut away section where the add-on scan doubler fits.



▲ Nice MUI front end for CyberGraphX perferences.



▲ CGraphX Mode, the rather basic screen mode editor that CyberGraphX relies upon.

Netconnect

■ Price: £59.95 ■ Developer: Vaporware ■ Supplier: Active Software ✆ 01325 352260

Could Netconnect be the complete Internet software solution you've been waiting for?

It's about time someone put together a commercial Internet package consisting of all the best registered shareware. The Netconnect package has been a long time coming, has it been worth the wait?

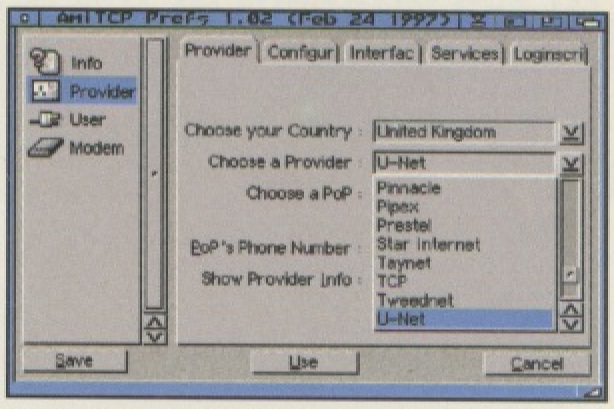
Netconnect may as well read Vaporconnect since virtually all of the software is from the Vaporware camp. Vaporware software is overwelmingly programmed by the German Oliver Wagner. I've long been a fan of Oliver's software so I was quite excited at the proposition of all of the best works presented in registered form. His Internet shareware has been extremely popular among Amiga net heads.

MUI dependant

Firstly, there's bound to be those with reservations, what with all of the Vaporware software requiring Magic User Interface. It's people will be sceptical, as when running a suite of MUI software, the GUI library system actually gets more efficient since all of the packages use the same GUI code in memory. We won't go into the pros and cons of MUI here but suffice to say Netconnect comes bundled with an unregistered version of MUI 3.8. The applications are all either the best or among the best that are available.

First thing you notice is that the CD is Magic Workbenched which mildly annoys me as I don't use the MWB icon palette so the icons look hideous. Activating the installer requests a hard drive location with 9Mb of free space. Wow, try fitting a PC Internet suite in 9Mb! As the installer proceeded to copy the package to hard drive, it oddly requested to check each country for which details of the Internet Service Providers (ISPs) will be copied. Never mind, when finished the all new AmiTCP 4.5 GUI config program appeared.

You heard right, AmiTCP 4.5 is bundled and it actually has a GUI config now, no more editing of endless text files! I was instantly extremely impressed as the package knew about most of the UK's ISPs and even their various Point Of Presence (POP) telephone numbers! In a jiffy I'd filled out the essential details for one of our accounts (username, password, full name etc), set up the modem to use my serial card and Bob's your uncle!



▲ The new GUI preferences for AmiTCP. A vast improvement on the former configuration method.

AmiTCP 4.5

After a quick reboot and an Internet Doc bar with MWB style buttons appears. It's even configurable so you can add/delete and edit the buttons! It's also a MUI Doc bar so it can be snapshotted anywhere on the screen. Press the 'plug and socket' type button to start AmiTCP 4.5 and the dial-up proceedure gets underway in a terminal window. Sadly it failed to connect for me and no error was reported other than AmiTCP exiting quietly. Charming. Turns out I needed to turn off 'header compression' but there was no indication why.

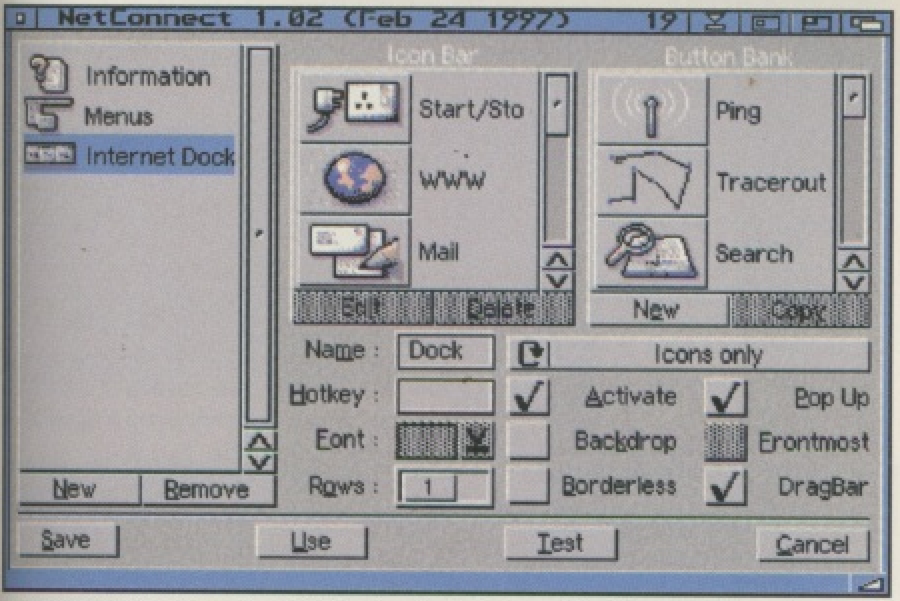
The rest of the Doc buttons launch the major applications provided which are: Voyager-NG for WWW browsing, AmIRC for IRC real-time chatting, AmFTP for FTP downloading of files, AmTelnet for telnetting into remote servers and a few more valuable utilities. MicroDot II is provided to handle the E-mail and News situation. It's shaping up to be a fantastic package and it was this area of Netconnect that caused the delays. It definitely needs more work so it's just as well that Active Software provide software updates.

In fact support for the package is quite impressive. It has its own web site and E-mail mailing list for support and announcements etc. It's a great collection of some of the best software as it is but with updates promised in the slightly weaker areas, things look extremely good for Netconnect. My only reservation is that while AmiTCP 4.5 is a fantastic improvement, it's still not as user friendly as Miami. For one thing I would have liked to have seen better error reporting in particular.

Professional

Unfortunately the provided software will not run under Miami, only working with the AmiTCP 4.5 provided. Active Software tell me this will change in the fugure. All in all it's a professionally put together package with buckets of support on offer, which all goes towards making this the best beginners all-in-one Internet suite around at the moment. ■

Mat Bettinson



▲ Another GUI configuration but this time for the Internet Dock bar seen below.



▲ Appearing at boot-up, this Internet Dock bar fires up AmiTCP and activates the major clients. Handy.

NETCONNECT

A500 A500+ A600 A1200 A1500 A2000 A3000 A4000

system requirements: Amigas with a modem, 9MB of hard drive space, Kickstart/Workbench 3.0 or above.

ease of use 88%
Impressive but AmiTCP needs error reporting.

performance 96%
Much of it this is the best Internet software around.

value for money 89%
Great value considering the combined value of the registered software.

OVERALL
A high performance no-fuss solution for Internet access. **89%**

Catweasel



■ **Price: £59.95** ■ **Supplier: Blittersoft ✆ 01908 261466**

Catweasel offers a solution to the problem of the Amiga's outdated double density drives.

One of the weak points of the Amiga is its floppy drives. The Amiga has stuck with its old fashioned DD drives, storing a mere 880k per disk, when everyone else in the world has moved on to HD (high density, not hard drive!) disks. Normally this isn't a huge problem, after all you can always just use two disks, but it is getting more and more difficult to buy DD disks these days. Although some companies have developed HD drives for the Amiga, they cost four times as much as similar PC drives and are very slow.

Catweasel, the odd L-shaped board with the cat's tail on the chip, offers a unique solution to this problem. The Catweasel slots rather neatly over the IDE connector on the motherboard. There is a through-connector on the Catweasel for hard drives to be connected undisturbed, but it is necessary to remove the top of the Amiga's RF Shield to fit it. A cable stretches out the side of the A1200 case, or if you have a tower, off the bottom of the motherboard, and can be connected to a couple of 3.5 or 5.25" type drives. Software installation is simple – just click on the install icon, tell it what you've plugged in and off it goes.

The beauty of Catweasel is that it is a very flexible floppy driver. By choosing one of the provided mountlists, you can connect drives configured as Amiga HD or DD, PC HD or DD, and even old Commodore 1541 drives as used with the Commodore 64. ShapeShifter 3.7 onwards support the multidisk device. There is even a utility to allow you to boot from a Catweasel drive.

The flexibility Catweasel gives you is unparalleled. A Catweasel plus PC HD drive costs only a little more than an Amiga HD drive, and the Catweasel set-up is a lot faster. A handy little work-around. ■

Andrew Korn

CD32 A500 A500+ A600 A1200 A1500 A2000 A3000 A4000

88%

Eyetech Buffered IDE Splitter

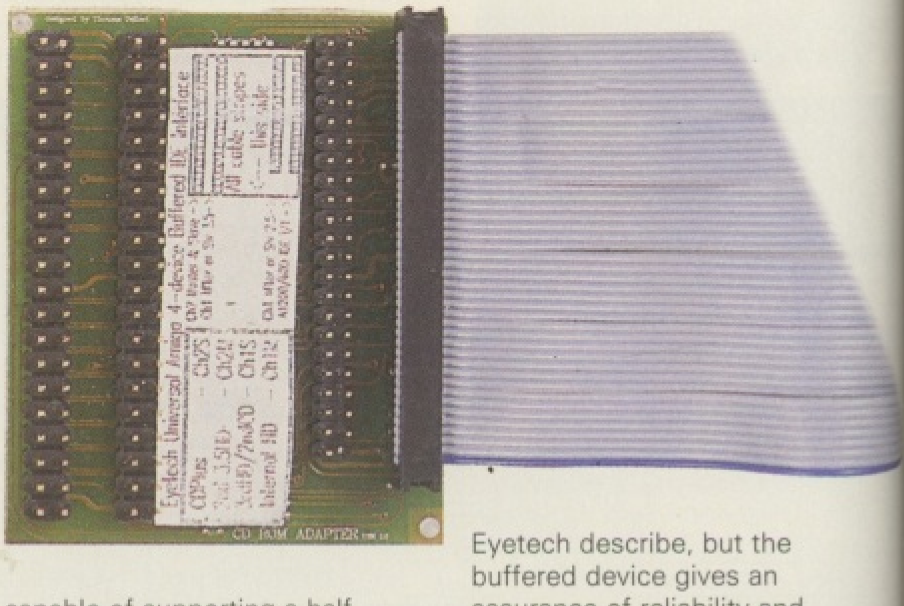
■ **Price: £39.95** ■ **Supplier: Eyetech ✆ 01642 713185**

This new interface from Eyetech takes four IDE devices and claims to save your Amiga from certain doom.

The IDE interface inside Amiga 600s and 1200s was designed with a single 2.5" hard drive in mind. Five years on this looks like a poor provision, but we are stuck with it. A simple step-up cable will allow the 44 pin connector on the Amiga motherboard to be used as if it were a standard 40 pin connector. This neat little circuit board from Eyetech promises a rather more polished solution to the problem.

The Eyetech board slots neatly inside the Amiga's case and is connected to the motherboard via a short 44 pin connector. Installation is very easy, with a sticker on the board making it perfectly clear which way around cables fit. On the other end of the board there are two IDE connectors. Two separate IDE chains can be connected to these, each supporting one device configured as master, one as slave. This requires software which supports two channels; ATAPI P 'n' P and ASIMCDFS both do the job, but neither are included with the board.

The big selling point for this board is that it is buffered. This means that the devices plugged into it do not connect directly with the CPU. Eyetech make a big thing about this, warning that without such a buffer your CPU is in great danger. A number of companies who sell unbuffered connectors have told us that Eyetech's warnings have worried a lot of their customers, they say unnecessarily. In our tests the unbuffered connector is perfectly capable of supporting a half meter cable with two devices on it without any reliability problems; one office A1200 system has run this way for years. On a longer cable, there were problems with read reliability, and fitting the Eyetech device seemed to remove this. We have yet to actually hear of anyone damaging their CPU the way Eyetech describe, but the buffered device gives an assurance of reliability and allows longer cables to be used in tower set-ups. Pay your money and take your choice. ■



Andrew Korn

CD32 A500 A500+ A600 A1200 A1500 A2000 A3000 A4000

88%

MakeCD 2.2

AMIGA MAGAZINE SUPERSTAR

■ Price: £30-£120 ■ Developer: Angela Schmidt and Patrick Ohley ■ Supplier: CUCD11

Now that CD cutters are finally a realistic option, Amiga CD burning software is starting to hot up.

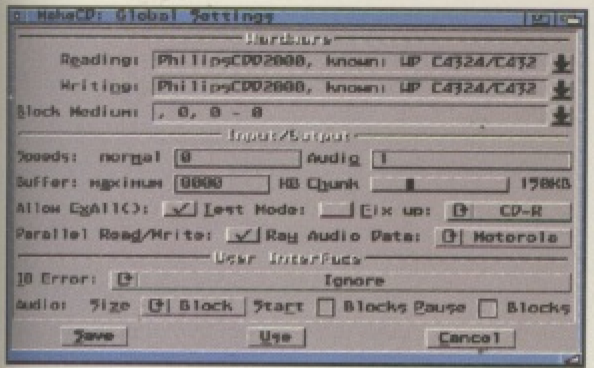
There's been little in the shareware domain to master and cut recordable gold CDR disks on the Amiga. There's Burn It which we'll look at next month and this newcomer from Germany called MakeCD. There's also the expensive and faithful MasterISO from Asimware but if you're looking to buy a cheap CD cutter to make some gold disks on an amateur-basis, MakeCD is the right price.

Neat interface

Unlike MasterISO, MakeCD doesn't require it's own screen. It uses the Triton GUI library which is slightly clunky but a great improvement over MasterISO. At first the interface looks quite complex, but almost everything is laid out in a logical fashion. There's an MUI-style help bubble which usefully appears over each gadget as the mouse hovers over it. Luckily this can be turned off.

The main page shows a list of tracks. As soon as one is added, the Source and Target sections become active. It's here that a birds nest of configuration options hide. The Track type can be data, digital audio or the lesser used 'XA' style tracks, used for PhotoCDs and such like. The Source can either be read from an image file on a hard drive or, in the case of a data track, taken directly from the Amiga filing system. That's right, this is the only CD mastering package that doesn't need to build a temporary file first; it can master on the fly to a CD writer. This is a great saviour of time and disk space if your machine is fast enough to handle it, as it removes the need for a spare 700Mb 'scratch pad'.

MakeCD can even copy a track off another (supported) SCSI CD-ROM directly to the target. The target can also be set as either a temporary file, a spooling style device such as a tape backup or the obvious; direct to a CD writer. This is a highly flexible approach.



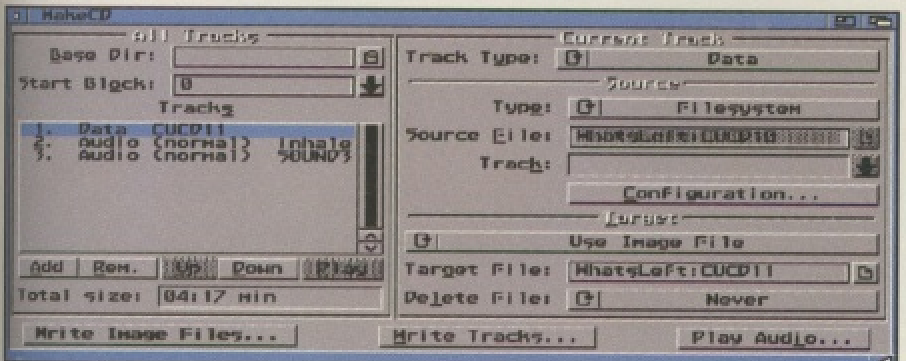
▲ MakeCD's comprehensive general preferences.

Impressive features

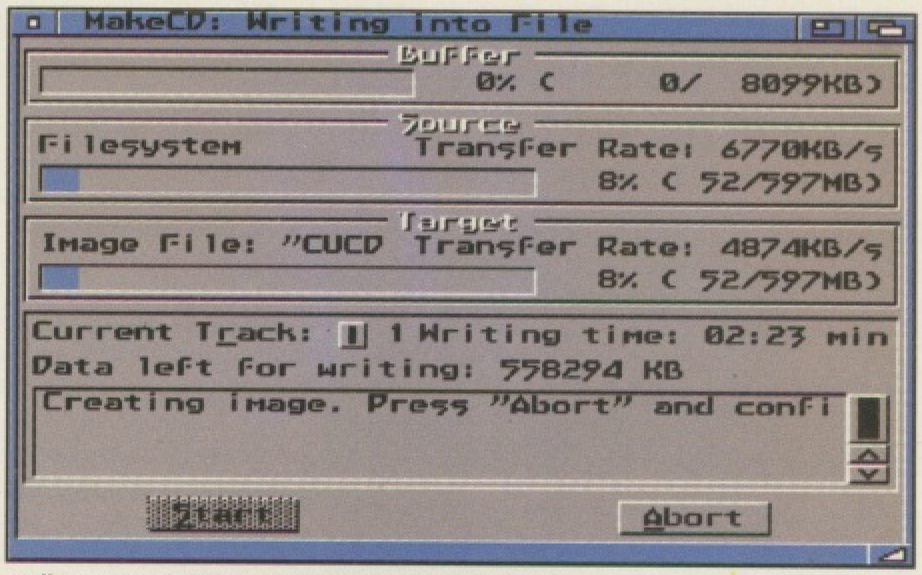
MakeCD's feature list is impressive when it comes to building ISO images also. ISO 9660 is the standard CD-ROM filing system. However, this standard only handles upper case filenames and has some other silly restrictions, useless for Amigas. Luckily there's RockRidge extensions which record the extra information. MakeCD has a mass of options in this regard and can be confusing in this area. The documentation isn't 100% on these aspects and needs to be improved.

It's possible to generate virtually any kind of ISO image. The danger is that you may run into bugs in the Commodore filing system like we did with CUCD10. CDs mastered with MakeCD can record Amiga specific details such as the 'script' and 'pure' file flags. You will need a modern CD filing system such as the PD AmiCDFS to read them though.

MakeCD uses a superb modular approach to provide the functions for building ISO images and the drivers for various CD writers on the market. A driver could simply be dropped in and suddenly the package will support that writer. MakeCD 2.2 supports many of the big boys of the CD writer scene and the authors have a pro-active policy of generating drivers for more. You might like to check the compatibility.guide in the MakeCD directory on this month's cover CD.



▲ The main MakeCD window where tracks are defined.



▲ Here we are building an ISO image onto a hard drive.

A key factor in writing CDs is performance of your Amiga. The CPU power and speed of the SCSI system are very important but things like reading/writing from different interfaces can help matters. Unlike MasterISO, the MakeCD authors don't guarantee a limited set of systems. Instead they've shown which systems are reported to have worked and which ones have not. Again see the compatibility.guide. Generally it's highly efficient but not to the level of MasterISO.

Good value

All up, MakeCD 2.2 is an extremely professional package with a very sensible approach to pricing. For the ability to cut CDs which aren't going to be published, the fee is a highly reasonable 75DM or around £30 – a total steal for a package of this quality. If you want to enter the professional arena, the cost is 300DM or around £120, still excellent value for money. Go and check it out for yourself now, it's on the CD! ■

Mat Bettinson

MAKECD 2.2

A500
A500+
A600
A1200
A1500
A2000
A3000
A4000

system requirements:
OS 2.04+ or higher
SCSI CD-R drive

ease of use 82%
Organisation and documentation needs to be improved, but generally more friendly than MasterISO.

performance 97%
Magnificent array of features and support for such an affordable package.

value for money 98%
£30 for this? A bargain and no mistake.

OVERALL
Time to get that CD cutter, MakeCD rocks!
92%

PD Scene



The thriving PD scene has thrown up some gems this month. Andrew Korn is your guide to another batch of goodies.

★★★★★	**Totally blinding**
★★★★☆	**Good**
★★★☆☆	**Average**
★★☆☆☆	**Substandard**
★☆☆☆☆	**Oh dear**

Braindead

Doom clone

■ **Available from:** Online PD, 1 The Cloisters, Halsall Lane, Formby, Liverpool L37 3PX.

■ **Tel:** 01704 834335

■ **Price:** 75p per disk and 75p P&P per order.

One of the more technically impressive Doom clones to turn up on the Amiga, this Polish effort is notable particularly for the digitised character graphics and because it's the only Doom clone, as far as I know, which allows the player to put the boot in.

The basic gameplay is very Doom-like. You select a variety of weapons that you find around the arena, but if that chainsaw just isn't cutting the mustard (or rather the bad guys), then hit the Alt key and your steel toe-capped boot strikes out with chilling force. As all the enemies appear to be leather jacketed skin-head thugs, this all appears pretty appropriate.

I don't know if there is a plot behind this or not; for all I I know you are meant to be a footie hooligan whose team is playing away in some kind of weird high tech mediaeval amalgam world – but plot really isn't important in this sort of game, what you need to know is how it plays.

In game terms there isn't much to do in Braindead yet, just wander around looking at some pretty samey backgrounds kicking and punching people or cutting them up with the amazing 'no blood' chainsaw, but technically this is a beaut. It runs on an unexpanded A1200, but give it a bit of CPU power and it rips along very nicely. The Polish programming team behind Braindead intend to produce a commercial release soon. We will keep you informed. ★★★★☆



Braindead

Charlie Cat Quickie v3

Cartoon

■ **Available from:** Roberta Smith PD, 190 Falloden Way, Hampstead Garden Suburb, London NW11 6JE.

■ **Tel:** 0181 455 1626

■ **Price:** £1.50 for 2 disks, plus 50p P&P

The latest short from Anthony Whittaker comes to us after a fairly long gap. Being a 'quickie', this two disk animation will run in just 2.5Mb, which given that it is long enough to contain a plot, is not a lot. Anthony Whittaker uses Moviesetter, the software popularised by Amiga legend Eric Schwarz, to produce his professional looking animations.

Charlie Cat cartoons, like those of Schwarz, are very much in the vein of the Warner brothers classics. There is a fairly standard cat and dog chase scenario in this one, the twist here being the introduction of a ninja feline. No more plot details to spoil it for you. If you like Amiga cartoons, get it. ★★★★☆

The Sun

Weird puzzle game

■ **Available from:** aiXS Software, 55a Iveshead Rd, Shepshed, Leics. LE12 9EP.

■ **Price:** £2

According to Robert Bauval and Graham Hancock, the Sphinx at Giza hides a secret wisdom which can be uncovered by those who understand the sun's processional cycle. The near incomprehensible cover letter suggests that the authors have cracked this secret and this game was the result. It will come as something of a surprise to Egyptologists to learn that the god Thoth programmed in Amos.

Every now and then a game comes along which just oozes originality. The first time you played Tetris, Lemmings or Populous, you knew you were playing something new. I'll be pretty surprised if The Sun becomes the new Tetris, but the comparison is a good one. The Sun owes little to any other game I've played – a touch of E-Motion, maybe, and a hint of "Simon" games – and gives you that sense that you're getting better each time you play, making it difficult to stop.

You play the part of a sun, orbited by eight icons, or glyphs, which slowly close in on you. As they close in, the sun is drawn towards the horizon, the game ending when it sets. By shooting the glyphs, you can cycle the images, the challenge being to match the glyphs to a target glyph and then shoot it again to score and raise the sun a little. Shooting the highlighted glyphs leads to bonus points. It's a bit like Tempest in 2D. Less complex than it sounds. The game can also be played as a one or two player challenge, the winner being the first to raise the sun above a bar, the "vault of the heavens".

From the wobbly, scratchy, black and white title page to the music which resembles a trance remix of Madness' "Night Boat to Cairo" to the psychedelically bright game graphics and bouncy effects, The Sun follows a clear design logic and a manic sensibility more than reminiscent of Jeff Minter. Brilliant. ★★★★★

Game of the Month



The Sun

Astrokid

Multi-genre game

■ **Available from:** Arrow PD, PO Box 7, Dover, Kent CT15 4AP.

■ **Tel:** 01304 832 344

■ **Price:** £4.99 plus 70p P&P

This licenseware megagame sends you on a six level quest, each level being a different game. You start flying through space shooting meteorites, mines and spaceships from a fixed first person perspective, an idea which started with Star Raider and lives on today even on the latest super console games. Following this you steer your damaged ship to a difficult landing, fly through caverns, solve puzzles and shoot big scary monsters.



Look at the screenshots and you will see that this is a game which oozes graphical quality. It is a pity that the gameplay just doesn't match up. The individual games are all based on stock genres the like of which we've all seen before, and the multiplicity of them means that they aren't particularly well implemented examples of their type.

This is the kind of game that keeps you interested because of the lovely graphics and variation of gameplay, but once you've seen all the levels you won't play it again. As freeware it would be great, but as licenseware the lack of gameplay bites. ★★★★★

Ampu

Worms clone

■ **Available from:** Online PD, 1 The Cloisters, Halsall Lane, Formby, Liverpool L37 3PX.

■ **Tel:** 01704 834335

■ **Price:** 75p per disk and 75p P&P per order.

There have been a few Worms clones knocking around since Team 17 released their masterpiece, but on the whole they offer nothing new. Ampu breaks the mould by actually doing some things the original doesn't.

Graphically the game is pretty nice. The gremlin-like antagonists aren't up to Team 17's standards, but they are animated properly, which is more than can be said for many competitors. The armoury, while lacking the humour of Worms DC, contains some genuinely fun new weapons, such as the 'freeze' which imprisons the wor...I mean player in a block of ice, and 'jetpack' which allows you to rocket dangerously around the screen.

Ideally, clones should do something new and this is the first of the Worms clones I've played which actually does offer some attractions that can't be found in the original. Not a bad effort in all. ★★★★★

Torque

Uridium clone

■ **Available from:** Online PD, 1 The Cloisters, Halsall Lane, Formby, Liverpool L37 3PX.

■ **Tel:** 01704 834335

■ **Price:** 75p per disk and 75p P&P per order.

Torque of the devil (sorry!) and another clone comes along. Just because a bunch of scientist announce they have cloned Dolly the sheep, everyone else wants to get in on the act. Andy Braybrook's fast scrolling all action classic Commodore 64 blaster is just the kind of thing nostalgia freaks want to see again, and author Shoah has come up with this to keep them happy.

There isn't the smoothness of gameplay of the original and the graphics don't really compare to the flashy ray-traced objects becoming so popular today, but if you're a fan of the original then snap it up. ★★★★★

Destructive Poker

Card game

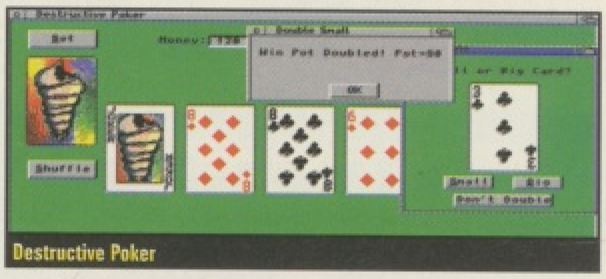
■ **Available from:** Classic Amiga PD., 11 Deansgate, Radcliffe, Manchester M26 2SH.

■ **Tel:** 0161 7231638.

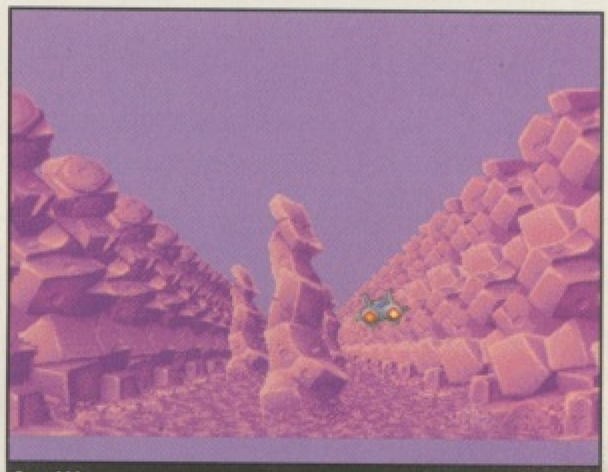
■ **Price:** £1 per disk and 75p P&P per order.

The irrelevantly named destructive poker is a solo card game based on poker and points gambling rather than the standard patience/klondike formula. The game is simple enough – you are dealt five cards, some of which you can change, the aim being to get a hand worth as many points as possible. By raising the ante for each hand, you can buy yourself extra card changes, and just to make things more fun, you can have a variable number of jokers in the game too. A double or nothing option is given to you after every win.

Destructive poker is simple, well presented, with the now obligatory interchangeable card-sets. It won't set the world alight, but if that's what you're after you'd better swot up on fusion condenser reactors instead. ★★★★★



Destructive Poker


Astrokid



Ampu

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68030/40MHz	£109.99	£139.99	£159.99	£199.99	£269.99
68030/40MHz & FPU	£129.99	£159.99	£179.99	£219.99	£289.99
68030/50MHz	£129.99	£159.99	£179.99	£219.99	£289.99
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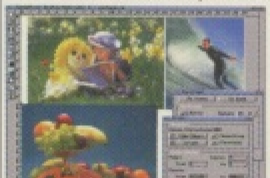
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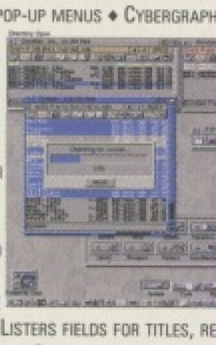
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AMIGA FORMAT GOLD

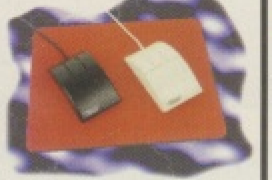
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A1200 Beginner Pack - 2 books (Insider A1200 & Next Steps), a 60 minute video, 4 disks of PD to go with the books/videos	£39.95
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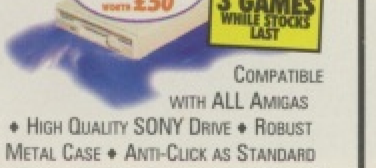
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PD Utilities

A varied selection of tools, reference material and educational disks are put on trial this month by Andrew Korn.

★★★★★	**Totally blinding**
★★★★☆	**Good**
★★★☆☆	**Average**
★★☆☆☆	**Substandard**
★☆☆☆☆	**Oh dear**

Learn the Klingon Language

Educational (?!)

■ **Available from:** Online PD, 1 The Cloisters, Halsall Lane, Formby, Liverpool L37 3PX.

■ **Tel:** 01704 834335.

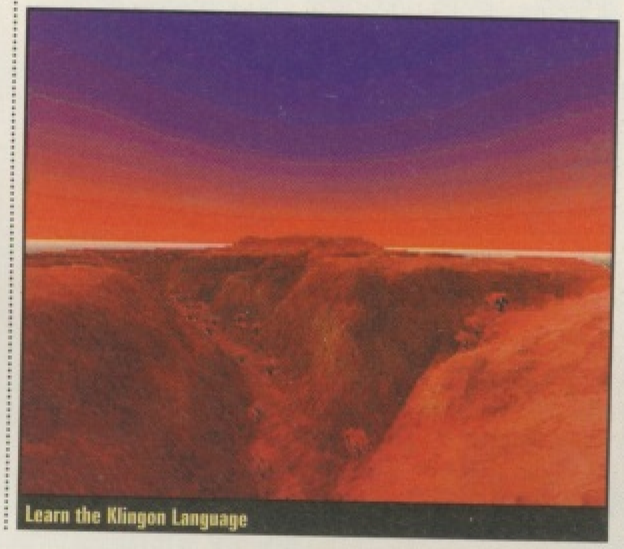
■ **Price:** 75p per disk and 75p P&P per order.

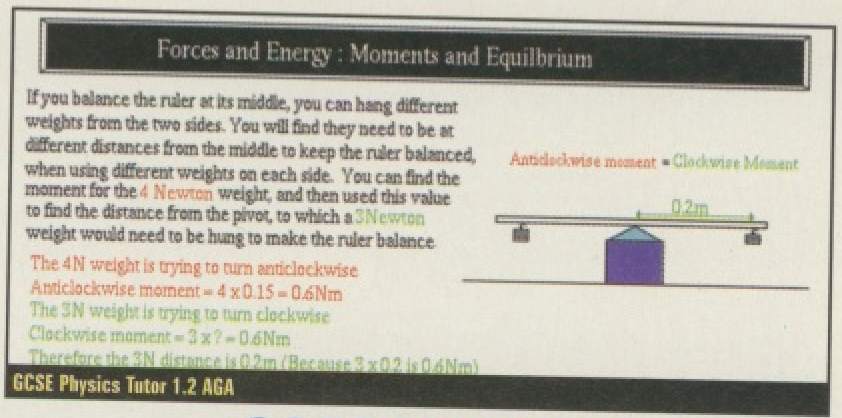
Tlhlngan jol dajatlh'o'? If the answer to that question is "hIja" then you don't need this disk because you speak Klingon already, in which case go straight to the bottom of the class.

This AmigaGuide tutorial to Klingon has the saving grace of not taking itself too seriously. There is a pronunciation guide, a short list of useful phrases, and just enough verbs and nouns to allow you to yell "he's behind you" at the screen next time you watch that git Spock sneak up to the Klingon guard with Vulcan nerve pinches on his mind. There are also half a dozen picture links showing various Klingon insignia, a couple of spaceships and so on, and a whole bunch of samples, mostly of examples of spoken Klingon, just so you can get your ear in on the vagaries of this guttural pronunciation.

The type of person who thinks that it is a good idea to live their lives according to the Klingon code of honour and wants to go to UCLA to take the bachelor's course in Klingon literature would find this disk far too shallow. There is no real look at the linguistic structure and grammar of the language, and the word lists are too eclectic to be of any use in everyday conversation. On the other hand these people are probably better off keeping their money for the psychiatrists bills. Oh dear, there we go again, offending hard core trekkies...the last time we did that we got a sack load of hate mail.

Well at least you get a nice Vista-rendered image of a Mars-like planet to inspire your unitelligable babble. Hlojl, Scotty. ★★★☆☆


Learn the Klingon Language



GCSE Physics Tutor 1.2 AGA

GCSE Physics Tutor v1.2 AGA

Educational

■ **Available from:** Online PD, 1 The Cloisters, Halsall Lane, Formby, Liverpool L37 3PX.

■ **Tel:** 01704 834335.

■ **Price:** 75p per disk and 75p P&P per order.

There has been a real shortage of commercial educational software on the Amiga, but the PD libraries have always been there with this sort of offering to plug the gap. The problem of course is that with something that isn't professionally released, you tend to be a touch suspicious about the credentials of the author. Many of the PD offerings of this type are, to be blunt, total trash: text only presentation and badly written, incorrect "facts". The authors of those titles should have a quick shufty at this.

The presentation is excellent, a good clear hyperbook type front end, covering light/optics, electromagnetism and forces. Each subject has a glossary explaining the main terms and detailing the critical equations. There are also a number of still and animated

Class HD Boot Utils 20

Utilities collection

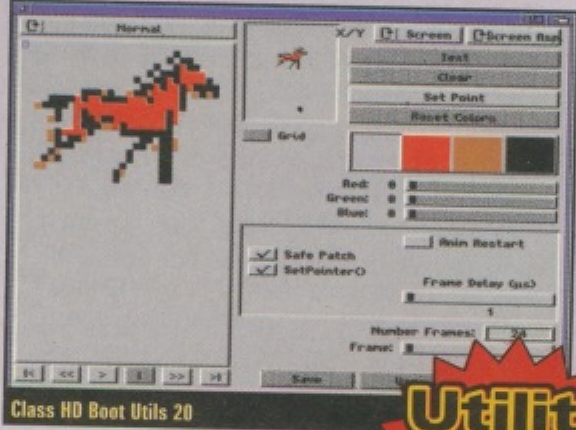
■ **Available from:** Classic Amiga PD, 11 Deansgate, Radcliffe, Manchester M26 2SH.

■ **Tel:** 0161 7231638.

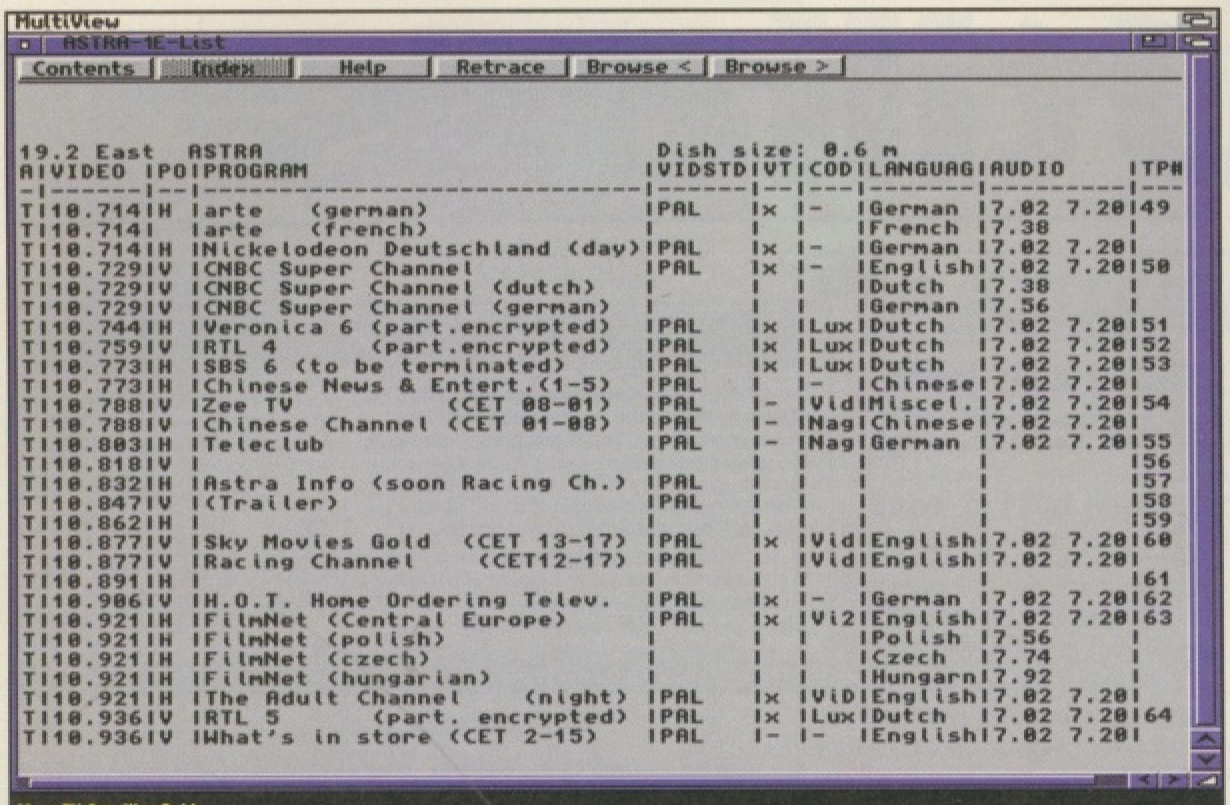
■ **Price:** £1 per disk and 75p P&P per order.

These things are common as dirt. The fact that this is the twentieth such disk that this particular PD house has put together is a pretty good indicator of that. To make a splash in such a crowded market, the collection really has to be a superior one, and to Classic Amiga Software's credit, this one really is.

Rather than cramming on utilities by the bucket load, this one makes do with just four: Bootpic 2.2, MagicPtr 1.0, Diskmaster II and SysInspector. Diskmaster II is probably the best known of the shareware file management utilities, a long way from being up to the level of Directory Opus 5+, but more traditional in its functions. MagicPtr 1.0 is the first release of potentially the best mouse pointer animation package. SysInspector is a system info utility which uses the ClassAct GUI system, and Bootpic 2.2 is an excellent bootpic utility which puts system information up on the screen during bootup. A neat little collection of tools that won't change your life, but could make it easier. ★★★★☆


Class HD Boot Utils 20

Utility of the Month



A	VIDEO	PO	PROGRAM	VIDSTD	VT	COD	LANGUAG	AUDIO	TP#
T	10.714	H	arte (german)	PAL	x	-	German	7.02 7.20	49
T	10.714		arte (french)				French	7.38	
T	10.714	H	Nickelodeon Deutschland (day)	PAL	x	-	German	7.02 7.20	
T	10.729	V	CNBC Super Channel	PAL	x	-	English	7.02 7.20	50
T	10.729	V	CNBC Super Channel (dutch)				Dutch	7.38	
T	10.729	V	CNBC Super Channel (german)				German	7.56	
T	10.744	H	Veronica 6 (part.encrypted)	PAL	x	Lux	Dutch	7.02 7.20	51
T	10.759	V	RTL 4 (part.encrypted)	PAL	x	Lux	Dutch	7.02 7.20	52
T	10.773	H	SBS 6 (to be terminated)	PAL	x	Lux	Dutch	7.02 7.20	53
T	10.773	H	Chinese News & Entert.(1-5)	PAL		-	Chinese	7.02 7.20	
T	10.788	V	Zee TV (CET 08-01)	PAL	-	Vid	Miscel.	7.02 7.20	54
T	10.788	V	Chinese Channel (CET 01-08)	PAL	-	Nag	Chinese	7.02 7.20	
T	10.803	H	Teleclub	PAL	-	Nag	German	7.02 7.20	55
T	10.818	V							56
T	10.832	H	Astra Info (soon Racing Ch.)	PAL					57
T	10.847	V	(Trailer)	PAL					58
T	10.862	H							59
T	10.877	V	Sky Movies Gold (CET 13-17)	PAL	x	Vid	English	7.02 7.20	60
T	10.877	V	Racing Channel (CET12-17)	PAL		Vid	English	7.02 7.20	
T	10.891	H							61
T	10.906	V	H.O.T. Home Ordering Telev.	PAL	x	-	German	7.02 7.20	62
T	10.921	H	FilmNet (Central Europe)	PAL	x	Vi2	English	7.02 7.20	63
T	10.921	H	FilmNet (polish)				Polish	7.56	
T	10.921	H	FilmNet (czech)				Czech	7.74	
T	10.921	H	FilmNet (hungarian)				Hungarn	7.92	
T	10.921	H	The Adult Channel (night)	PAL	x	ViD	English	7.02 7.20	
T	10.936	V	RTL 5 (part. encrypted)	PAL	x	Lux	Dutch	7.02 7.20	64
T	10.936	V	What's in store (CET 2-15)	PAL	-	-	English	7.02 7.20	

Msat TV Satellite Guide

diagrams, and a bunch of interactive test questions. This version is actually a demo of the full release. The full version is a £4 two disk licenceware title from 5DL, but this gives you a good look at what is there.

I don't think this title will offer much to more advanced GCSE students, but it could be an excellent revision aid for students who are finding the subject a bit hard to get into. ★★★★★

Msat Feb 97

TV satellite guide

■ **Available from:** Classic Amiga PD., 11 Deansgate, Radcliffe, Manchester M26 2SH.

■ **Tel:** 0161 7231638.

■ **Price:** £1 per disk and 75p P&P per order.

Msat guide is an AmigaGuide to satellite television. I don't mean that you can look up the time UK Gold are showing the next episode of The Bill; this is a rather more specialist sort of a guide than that. Author Tom Christensen's work is a compilation of technical information on many of the communications satellites that orbit the Earth, beaming their load of televisual delights to the hungry masses below. It may at first seem like this is the height of nerdism, a kind of low orbit trainspotting, but there is rather more of a reward to this than collecting registration numbers. If you have a dish, you can pick up the signals from these satellites and tune into all sorts of weird and wonderful channels. Fancy finding out how Bosnian TV reports the conflict, or want to watch stripping housewives on Rai Due? It's all here in this enormously detailed guide, and the author promises monthly updates too. If you are a bit of a satellite jockey, you'll curse Tom Christensen for ruining your social life. ★★★★★

Picboot 97

Bootup picture displayer.

■ **Available from:** Classic Amiga PD., 11 Deansgate, Radcliffe, Manchester M26 2SH.

■ **Tel:** 0161 7231638.

■ **Price:** £1 per disk and 75p P&P per order.

Picboot is one of many similar programs, but it is a good one. It looks in your prefs/patterns directory, and will randomly choose any image which ends '.pic' and display it while you are booting up. It really couldn't be much simpler. Just copy a couple of files to your c: directory, add a line to your startup-sequence and you are ready to go. Well OK, it could be easier, there could have been an installer script, but if you don't know how to do it yourself, it wouldn't hurt to learn. The disk comes with a good collection of Amiga appropriate images such as the one reproduced here, but you can any of your own pictures. The Aminet actually has a sub directory purely filled with bootpics, mostly pro Amiga or anti PC, but if your favourite render is more to your taste, it will do that too. ★★★★★



Picboot 97

Best of the Aminet



Spooky demos abound on the Aminet

To broaden our coverage of Amiga PD further still, this is the first of a regular new column dedicated to highlighting some of the best new additions to the Aminet on-line archive. If you have Internet access you can download these and thousands of other files from **http://www.aminet.org/~aminet**. Some PD companies will even download specific files to order and copy them to floppy disk for a small fee.

To start off with this month I'm going to direct you to **docs/misc/petition.lha** (1k) where you can fill in Ed Collins' E-mail petition for more Amiga support from games publishers. From there, I suggest a quick jaunt in the direction of **game/gag/AMooGA2.lha** (105k) for some topical humour on the Gateway 2000 takeover. Expect jokes like this to get boring any time now, but enjoy them until then.

I have to confess to being a fan of demos. Intros are my favourite type, if only because they tend to be a lot more stable than mega demos. Check out **demo/aga/sn3-64kb.lha** (372k) for a small but excellent collection of 64k demos entered into the Scenest '97 demo party in Budapest. **demo/aga/k642.Impulse**, the winning entry, is worth the download time alone.

Think that Mac trashcans are cool? Then **util/wb/benchtrash.lha** (21k) is the one for you. It leaves a trashcan out on your desktop – files dropped on it can either be moved to your trashcan directory or deleted, there is a progress bar option, and you can even drop disks on it and watch it desperately try to eject them.

Not forgetting...

That old serial device letting you down? Help is on the way! **comm/misc/new8n1.lha** (73k) replaces your old serial device with a faster, leaner, fitter device driver, and it's meant to be reasonably stable too! On a hardware theme, if you have a multiscan monitor such as the Amiga / Microvitec 1438 or 1768, you can use them with PCs too – go to **hard/driver/amigamon.lha** (1k) for some win95 drivers for these monitors. Particularly useful if you have a monitor switcher or a Siamese.

We'll end with the In Absurdum slideshow at **demo/slide/LBN-InAbsur.lha** (491k), a great collection of colourful, well drawn cartoony images. Happy surfing!

CD-ROM Scene



The huge response to our DIY tower feature means more of you than ever have CD-ROM drives. We now offer you the chance to get some recent disks – free!

★★★★★	**Totally blinding**
★★★★☆	**Good**
★★★☆☆	**Average**
★★☆☆☆	**Substandard**
★☆☆☆☆	**Oh dear**

SoundFX Sensation

■ **Available from:** Epic, 43 Akers Way, Swindon, Wilts SN2 2NF

■ **Tel:** 0500 131486

■ **Price:** £14.99

SoundFX Sensation is a massive collection of samples. There are around 500Mb of them on this disc, mostly standard Amiga 8SVX files, but with a nice smattering of WAVs as well. The title of the CD really says it all – unlike many sample collections which try to cover as much ground as possible, this one has its sights firmly fixed on providing sound effects for games writers, animators, film makers, or musicians with a warped sense of humour. The samples are arranged by subject, from alarms to weapons, and contain a sound to suit pretty much any situation you are likely to come across.

Epic have provided a front end for this disc, a player which allows you to play the samples by hitting keys on your keyboard, great for sorting through this massive collection. The front end looks very nice but is marred by the barely readable dark green on black file requesters which Epic seem unfortunately keen on, and it has a tendency to quit for no apparent reason.

Not content to hand you more samples than you could ever possibly use, Epic also supply a directory containing sound and music tools. As this is a multi-format CD a lot are for PCs, but the 50Mb or so of Amiga utilities contains pretty much everything you need to get the best out of these samples.

Make no mistake, this is a Sound FX CD, and if you buy it expecting it to be full of great instrument noises for making mods then look elsewhere or you'll be disappointed. If you want samples of explosions, barking dogs, cartoon boings and endless vocal soundbites, you will be very happy. ★★★★☆

Epic Encyclopaedia '96

■ **Available from:** Epic, 43 Akers Way, Swindon, Wilts SN2 2NF

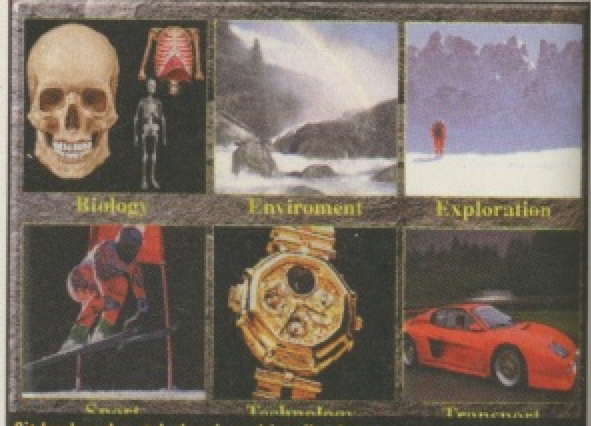
■ **Tel:** 0500 131486

■ **Price:** £19.99

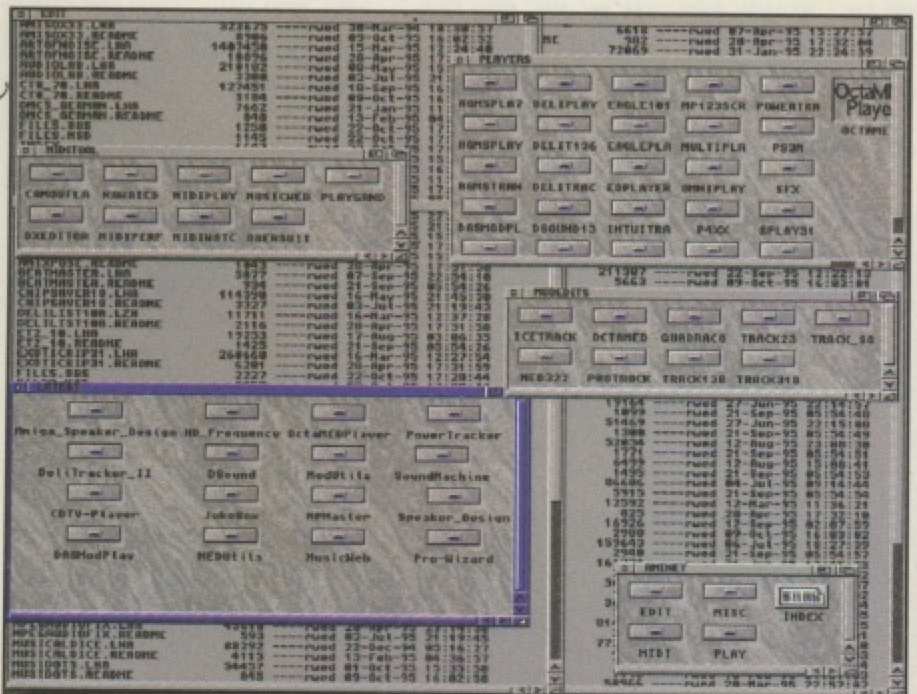
If you read the review of the '97 version in our April issue, you will know that we considered this older version to be notably inferior. When we originally reviewed this 9 months ago, we gave it 77%, which was a reasonable score if a long way from the 91% we gave Epic '97. Updated, it deserved a screenstar award; in this form it remains useful and informative, but hasn't the entertainment value of the newer version.

The Encyclopaedia installs a front end and directory structure to your hard drive. This allows new plug-in entries to the encyclopaedia to be distributed via floppy or the Internet, a feature you wouldn't normally expect on a CD-ROM. Epic have provided installers for the full version and for a lite version for users of unexpended machines.

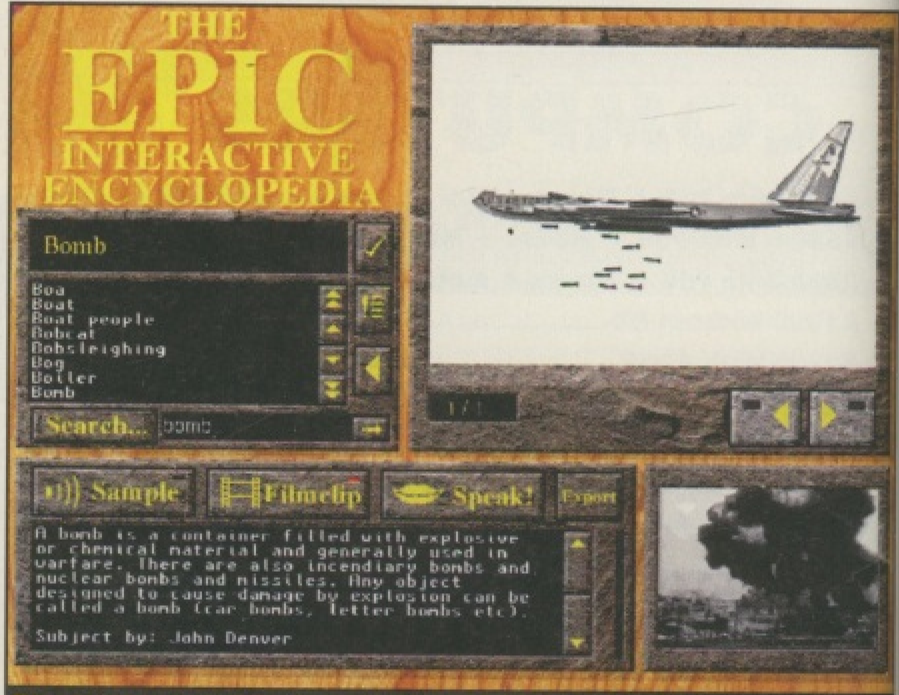
The front end is nicely polished, with a scrolling selector for you to pick your subject and windows for the text output, pictures and movie clips. Clicking on the pictures displays them full screen, but alas the movie clips don't have this feature; this was another addition to



Sit back and watch the six multimedia shows.



SoundFX Sensation is full of wizz-bang samples.



This entry has a movie clip and a picture, although that's not the case for all of them.

the '97 version. A well implemented hotlist system allows you to sort through the directory list selecting the subjects that particularly interest you for later perusals and easy location.

One of the first things that strikes you on using this encyclopaedia is how frequently you are greeted with the message "Sorry, there is no picture for this subject". It is a little unfair to criticise Epic too boldly for this, after all the disc is packed. Rival products make theirs seem more "multimedia" by having less entries. The '97 version has an option to display only entries which have some multimedia support, an excellent feature which gives you the best of both worlds; with this one you'll have to grin and bear it.

There is a lot to explore here; that Epic have managed to compile entries about so many different subjects is enormously impressive, although we would have liked to have seen in-depth articles on the more important subjects. The frequency of text only entries is a let down, but it seems churlish to criticise an Encyclopaedia for having too much text, so I'll shut up now. I would choose to pay the extra for the updated version, but the fact is that this is one of the most popular Amiga CD-ROMs ever says it all. ★★★★☆

Mick Davis' Cartoon clip art

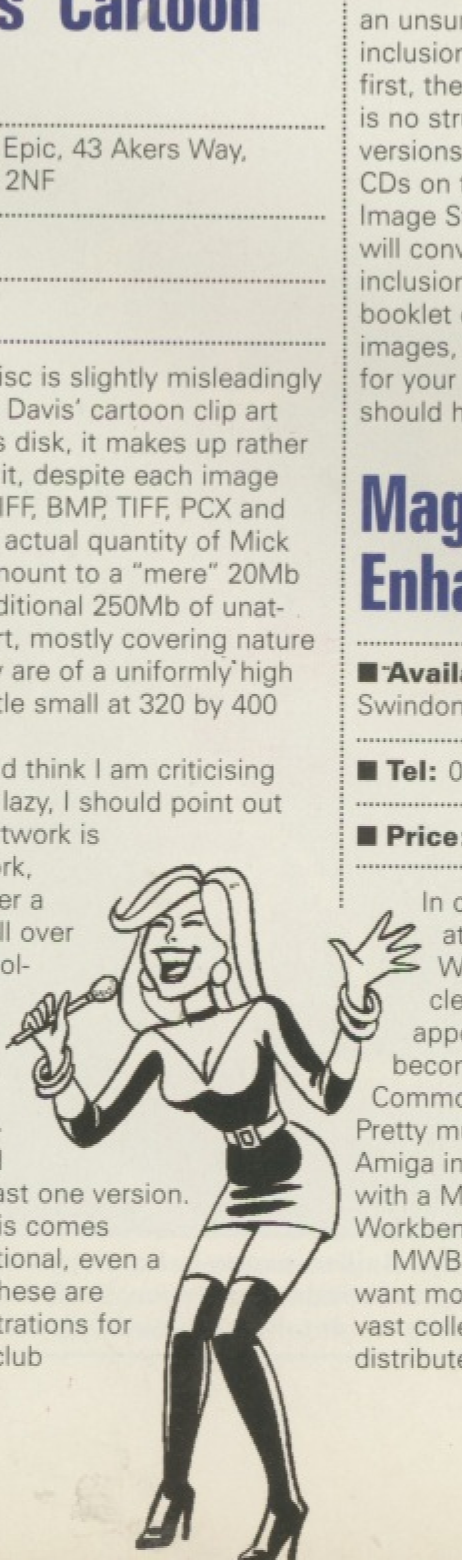
Available from: Epic, 43 Akers Way, Swindon, Wilts, SN2 2NF

Tel: 0500 131486

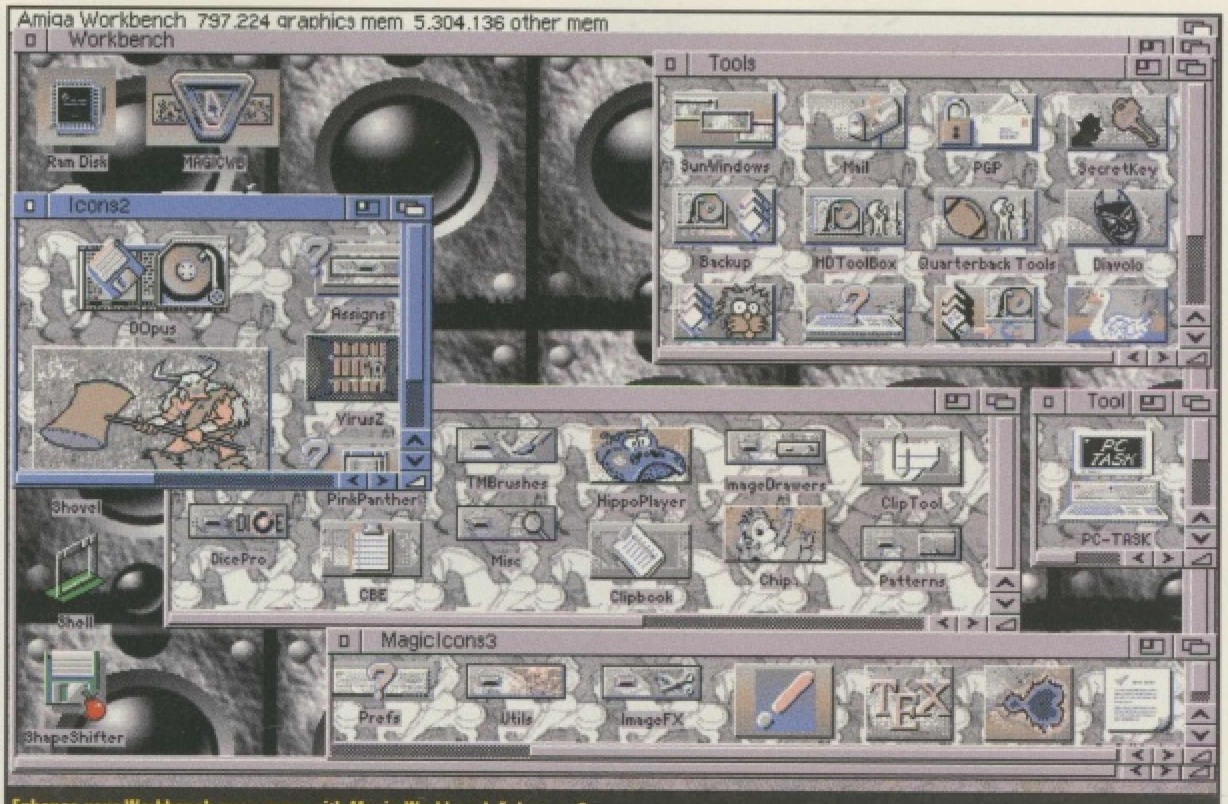
Price: £19.99

This rather strange disc is slightly misleadingly titled. Although Mick Davis' cartoon clip art gives its name to this disk, it makes up rather less than the bulk of it, despite each image being reproduced in IFF, BMP, TIFF, PCX and two sizes of GIF. The actual quantity of Mick Davis' illustrations amount to a "mere" 20Mb or so. There is an additional 250Mb of unattributed colour clip art, mostly covering nature and technology. They are of a uniformly high quality, although a little small at 320 by 400 and 16 colours.

Lest anyone should think I am criticising Mick Davis for being lazy, I should point out that as his cartoon artwork is monochrome line work, 20Mb is actually rather a lot – he has done well over 400 images for this collection. The images are large so as to reproduce as well as possible when printed out at high resolutions, up to 2000 odd pixels square in at least one version. Stylistically Mick Davis comes across as being traditional, even a little old fashioned. These are more the sort of illustrations for greetings cards and club newsletters than for the hardcore techno fanzines. The draughtsmanship is good, the style and quality constant throughout, so check the images reproduced here.



Two things struck me about this disc; an unsurprising omission and an excellent inclusion. To get the bad news out of the way first, these are all in bitmap form only – there is no structured art format such as EPS. EPS versions of all 400 or so pics would take two CDs on their own, so this is hardly surprising. Image Studio, which we gave you last month, will convert to EPS for you. The Excellent inclusion is the CD case inlay, a 28 page booklet containing thumbnail images of the images, which makes finding one appropriate for your needs a breeze. All image disks should have one! ★★★★☆



Enhance your Workbench once more with Magic Workbench Enhancer 2.

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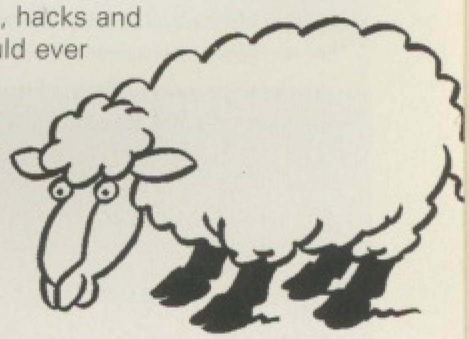
Tel: 0500 131486

Price: £17.99

In case you haven't been paying attention for the last few years, Magic Workbench by Martin Huttenloher is a clever little system for polishing up the appearance of your Workbench which has become the de facto standard for post Commodore 4 colour grey Workbenches. Pretty much every program written for the Amiga in the last couple of years has come with a Magic Workbench icon, making modern Workbenches look vastly better.

MWB was a huge shareware hit, but people want more. CD-ROM has made it possible for vast collections of backdrops and icons to be distributed. Unfortunately there just aren't that many to go around, so if you've got a few compilation CDs, the chances are that you already have many of these images. Having them all collected in one place is of course useful, but the real saviour of this disk is that Epic have packed it with all sorts of little extras. Following the Workbench enhancement line, this disk has a lot to offer in the way of Workbench hacks, small utilities and the like. In case you get bored they have included a huge selection of Workbench games, and there is an excellent selection of networking tools too.

This is the kind of disc that you use selectively – after all you are unlikely to want more than one backdrop at a time, and there are far more fonts, hacks and utils than you would ever use – but to have such a range puts your ideal customisation in easy reach. The best compilation of this type I've seen. ★★★★☆



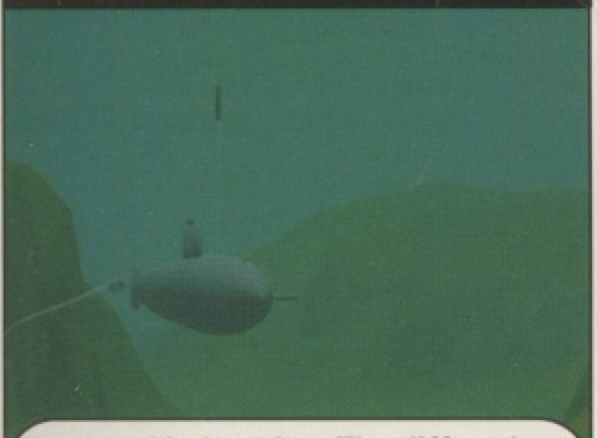
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Art Gallery

Pictures from talented readers get a showing once again, along with some chin stroking from our man Andrew Korn.

Deep Strike by C.A.Shaw



Rendered in Imagine. The diffused light adds a lot of impact, but the air bubbles look artificial. Imagine 4's blobs feature could overcome this.

Final Conflict by Andy Watkinson



Drawn with Photogenics and PPaint. Use of a mid-tone as the base colour is a tradition in chalk drawing, but Andy shows that the technique can work well in computer art.

Shadowlands by Paul Hanson



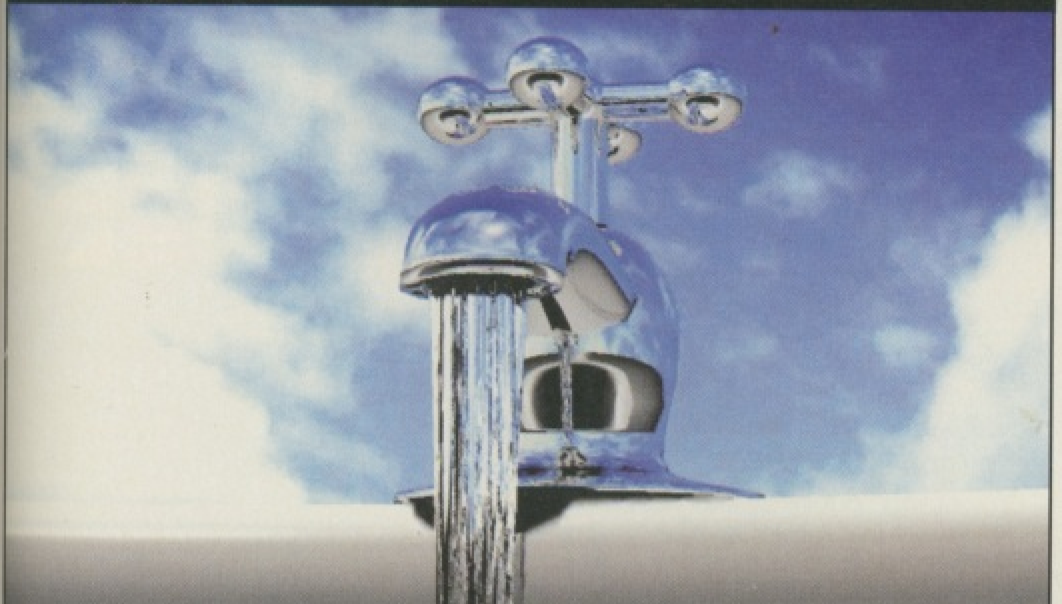
A topical image at a time when the Galileo probe is boldly going, this picture wisely trades scientific accuracy for artistic excellence. A dynamic composition, beautifully executed. Paul sent no details on how it was done, just enjoy.

Tap by E. Borthwick



This picture was produced with Cinema 4D 2 and is proof that 3D rendering software has more potential than merely creating space battles. Mark's abstract is reminiscent of the organic images of computer "sculptor" Latham.

Alien by Mark Rowles



Rendered in Imagine with post-processing in Dpaint IV and Image FX. The backdrop lends the otherwise prosaic subject an almost surrealistic sense of grandeur.

Pengo by Lee Martin



Lee Martin gets up to his penguin antics with Cinema 4D 3. We gave 92% to Cinema 4D 3 last month, and here's an example of why.

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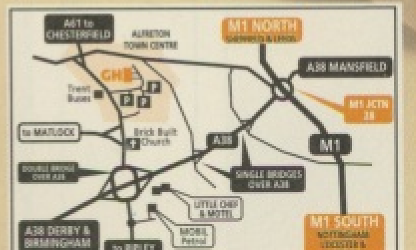
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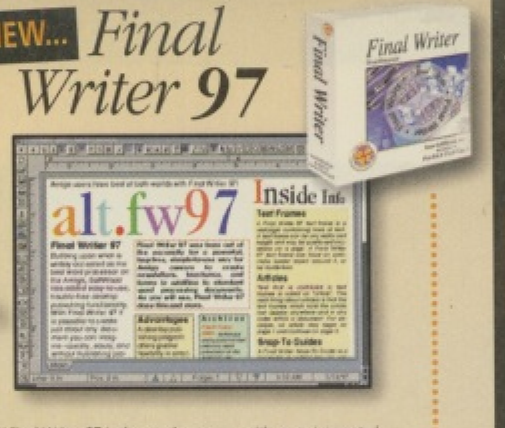


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- Position text and graphics in single pixel increments

*✱Final Writer **97** text frames are rectangles containing lines of text. These text frames can be any width or height and may be positioned anywhere on a page. Frames may have a border if required or can simply appear as body text within the document.*

*✱✱ An article is a term used to describe text which is contained in one or more text frames. Because text frames are linkable, an article could for example, begin on page 1 and continue on page 3. An infinite number of articles can be created within Final Writer **97** documents.*

Creating a text frame in Final Writer **97** is simple. Just click the mouse on the page where you want your text to begin - and start typing. The frame can then be modified to your preferences once text has been entered. Text can be fully formatted within a frame just as easily, or edited at a later time as you prefer.

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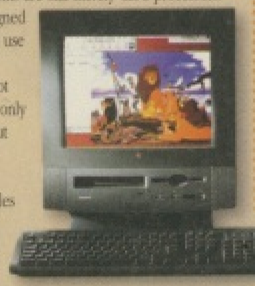
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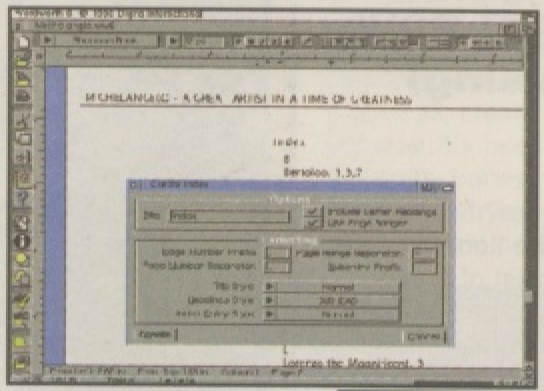
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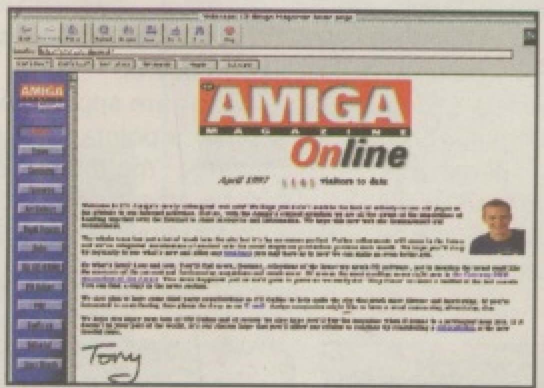
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Imagine 4.0 p76



Desktop Publishing p82



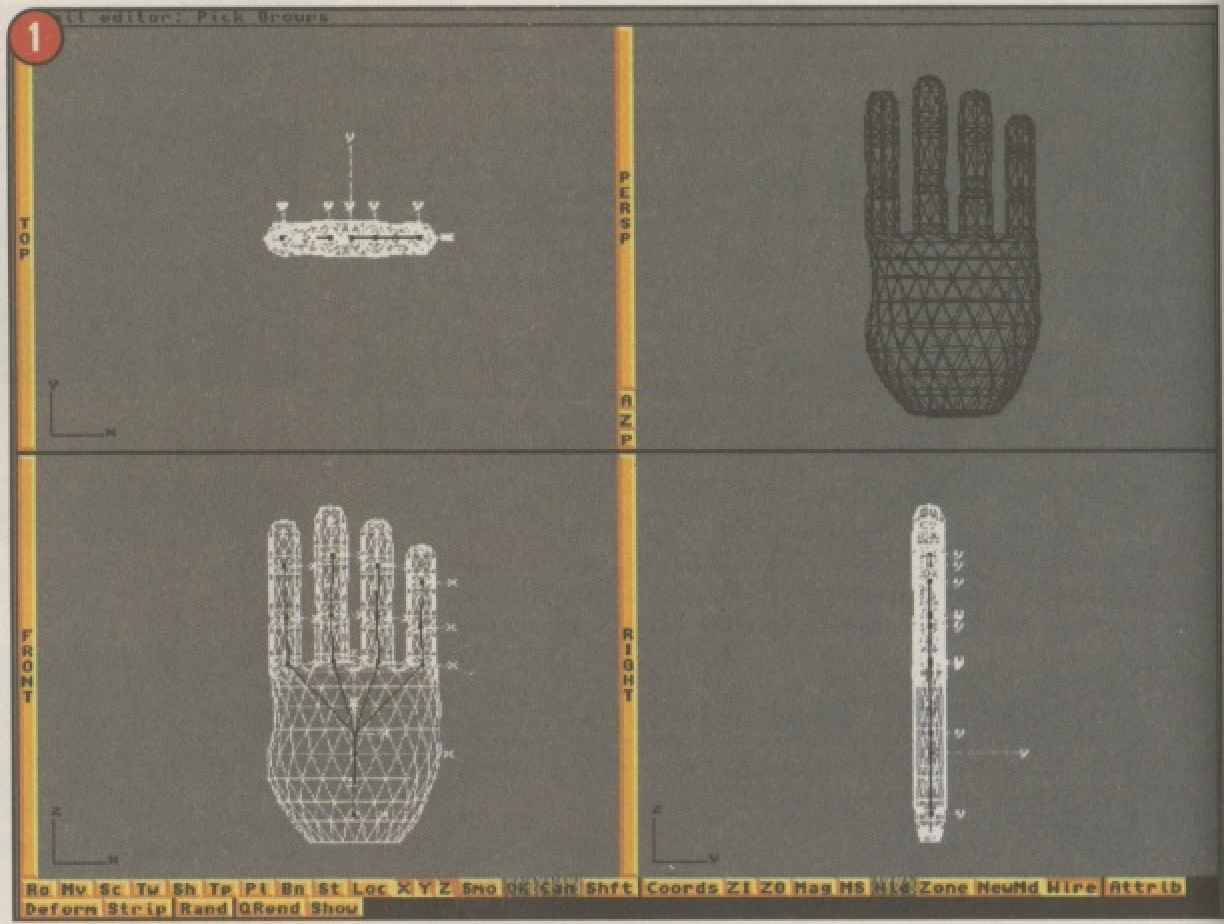
Surf of the Month p89

Regulars

Imagine 4.0

PART 6

Dem bones, dem bones, dem rendered bones – following on from last month's look at States, we're now in a position to experiment with one of Imagine's most powerful (and confusing) features...

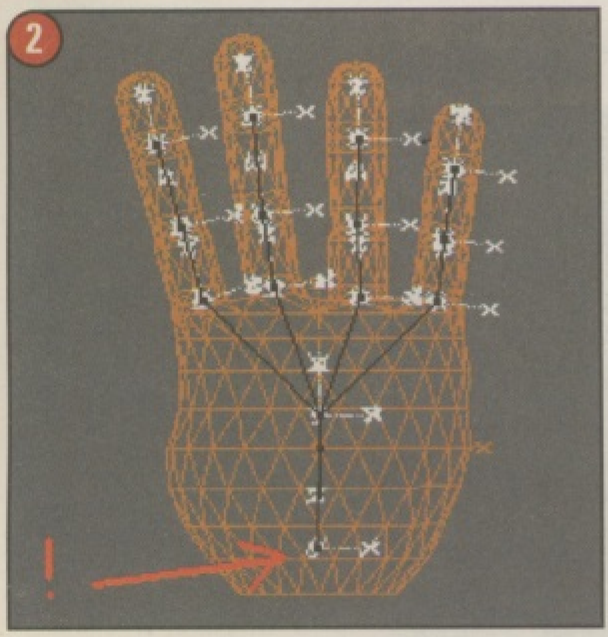


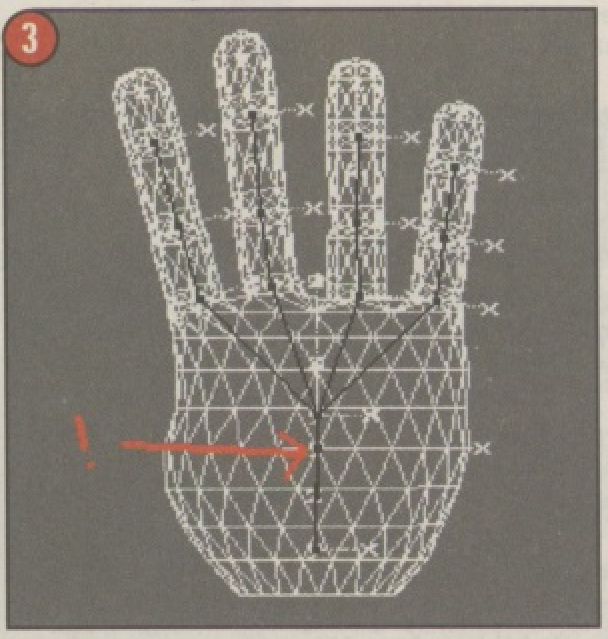
Why do we need bones? So we don't collapse to the floor of course. We all consist of bones, around which is wrapped our skin. This is how Bones work in Imagine – a central skeleton is created, and a single, continuous surface is created around it.

Unlike joining objects by placing them side-by-side, a properly boned object will have a single surface skin covering it: when the objects underneath move, so will the skin. It will stretch and contract as needed, taking care of any textures mapped onto it. This is the key to professional looking animation, which is more fluid and organic than would otherwise be possible. Using Bones is a tedious, timeconsuming and tricky process, but the final results are worth it. No other animation package gets close to offering this kind of power.

Bones are applied to existing objects, to provide points around which they can be animated. You therefore create the single surface object, and then place the bones inside it. How you go about creating the object is up to you – there are many ways offered by Imagine, such as the Blob objects for organic looking shapes. Bones are positioned where you want the object to 'hinge', for example, at a finger joint.

You then need to tell Imagine which parts of the object's surface will move, and which won't. For example, when you bend your finger, the skin on your finger tip will stay perfectly still relative to the end of your finger. However, the skin at the knuckle will stretch. Perhaps now you can grasp how much work there is involved in creating a realistic object with bones.





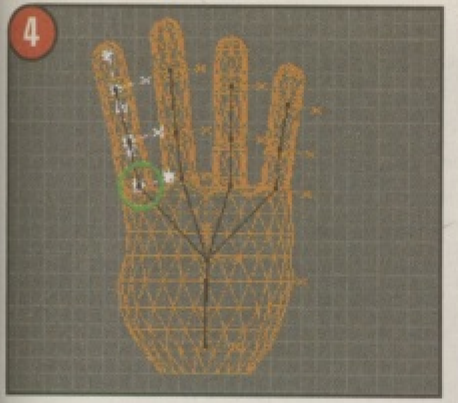
Creating Bone Objects

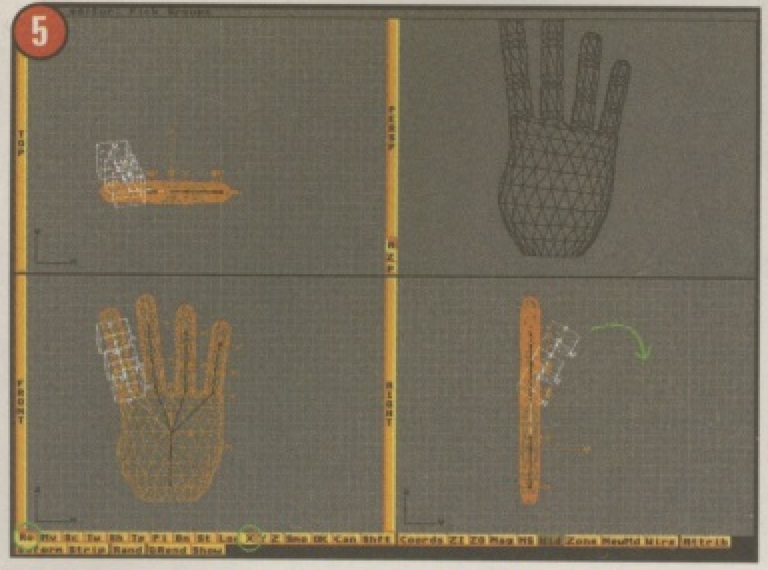
In order to save time, we'll use an existing object to apply our Bones to. You should find this object with your original installation of Imagine, but it's included again on the cover CD in case you have lost it. It's called 'hand.bon' and when you load it into the detail editor, you'll see something like this:

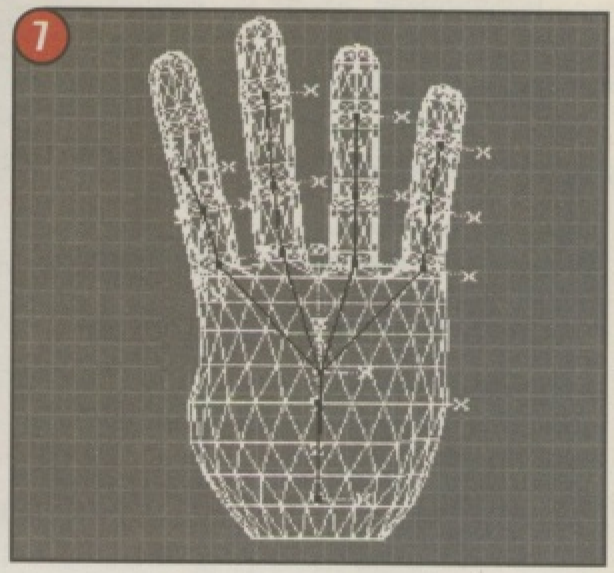
(See fig.1)

Notice how all the bones (the axes) are grouped together. If you click on the very bottom, all the others will become selected. Notice how all the axes are orientated so that their Z directions all point to the end of their associated fingers.

(See fig.2)

4


5


7


There is another axis, the object's internal axis. When you click on it, the object itself will be selected.
(See fig.3)

You will need to be able to select both the bones and the object separately, so don't get confused at this point or you won't get any further. Remember the object has two parts: the bones and the surface. The surface also has its own axis, like any other Imagine object.

Using Bones

Once a boned object has been properly created, it's dead easy to use. Before we get bogged down in the details, here's how to use the hand object. Load it into the Detail Editor (if you haven't already). You know there are two parts to this object: the linked bones, and the object itself. It's important to remember the distinction.

At the moment, the hand is in its default state, and all fingers are open. We're now going to make one finger curl up.

Step 1

Make sure you are in 'Pick Groups' from the Mode menu. Select the first bone in the first finger. You should see the remaining bones in the finger become selected too.
(See fig.4)

Step 2

Rotate the finger in the X direction about thirty degrees. It doesn't matter which way, as the hand is symmetrical. Notice how only the bone moves – the hand object itself remains unchanged.
(See fig.5)

Step 3

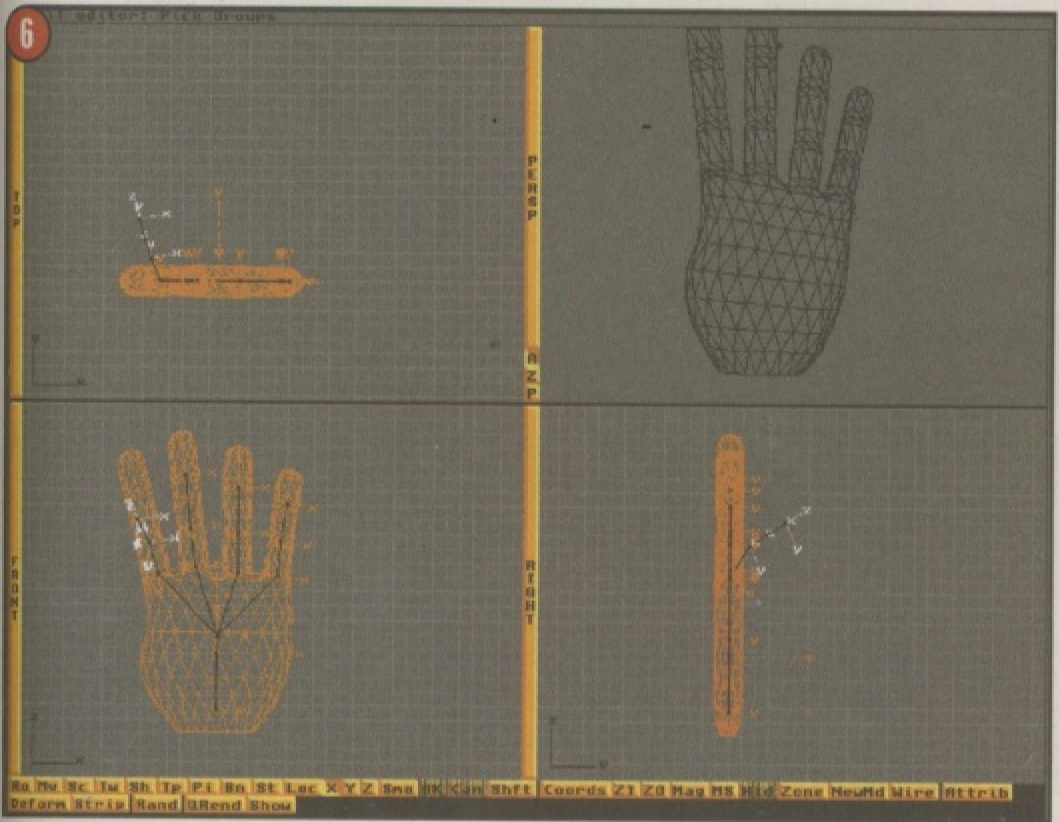
Select the next bone up the finger, and rotate it in the X direction by another thirty degrees. It too will curl, leaving the skin behind (urgh).
(See fig.6)

Step 4

Now we will update the rest of the hand. Select the hand object's axis – not a bone. This will cause the hand object to become active, like this.
(See fig.7)

Step 5

Select 'Bones Update' from the States menu. After a short pause you will see the finger redrawn so that it follows the shape of the bones. Look closely and you'll see only some triangles have changed their shape, while others have remained as before.
(See fig.8)

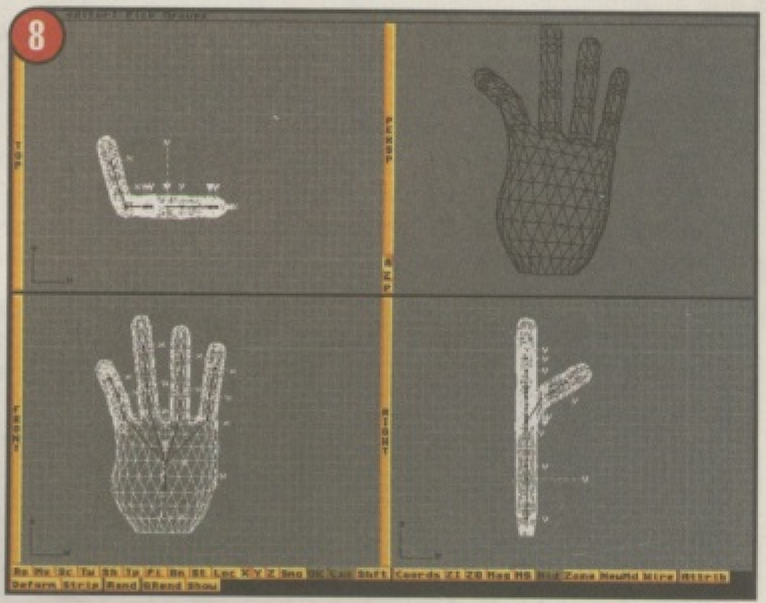
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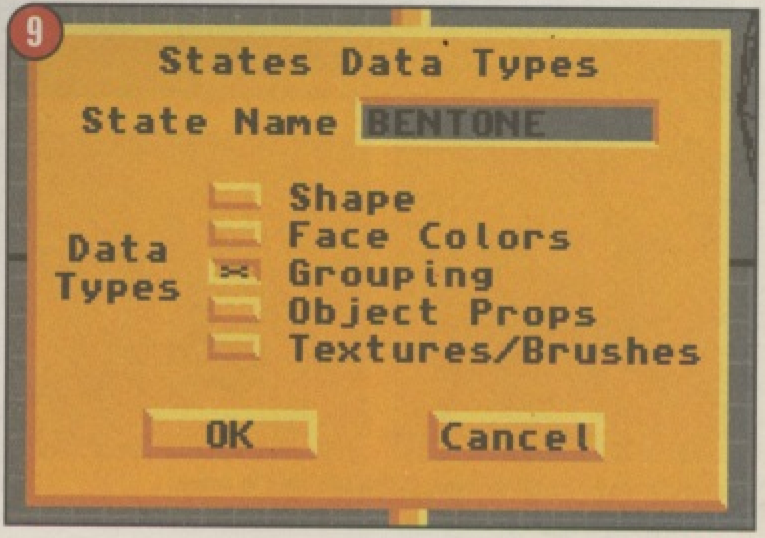
Step 6

Now we've come this far, you should create a new state for the hand object with one finger bent. Use the 'Create' option from the States menu. Make sure only the Grouping option is selected.
(See fig.9)

Making your own Bones

Ready to start the magic spells required for the bones feature to work properly? Good for you. First of all, create the object which you want to animate. It's possible to use existing objects and apply bones: if you want to do this, it's worthwhile trying to get the object into a good, neutral pose.

8


9


Continued overleaf ▶▶▶

Now add the bones by adding Axis objects. Make sure you add them in the right order, and keep their Z directions pointing in the right way.

Here are some rules when defining bones:
Each Z axis must point to the final object in the chain.
Each object must point in the direction of the final object.
Each bone must be grouped, one to another.
Even separate objects (such as individual fingers) must eventually be grouped.

When this is done, you are ready to create a new State. Make sure that the object is selected, by clicking on the bottom axis. All the bones will become active. If you were creating the object from scratch, you would now create a new State.

There are some rules to make sure this all works:
The first state must be called DEFAULT.
The Shape box must be activated.
It must be the first State you define.

Now you need to inform Imagine which parts of the object will deform to allow the bones to rotate. This is achieved through using sub-groups. Two sub-groups of faces are applied to each bone: use the 'Pick Faces' mode and then 'Assign Subgroup'. Each sub-group of faces associated with a particular bone will move relative to the bone.

Sounds complicated? Yes, it is. Your best bet to gain an understanding what is going on is to examine the Hand object in detail. Select the object, and move to Pick Faces mode. When you select 'Pick Subgroup' (from the Pick/Select menu) you will see a list of all the subgroups which make up the hand. When you select one, the relevant faces in the hand will become selected.

Now, if you pick a bone in the hand and select the option 'Bone Subgrps' from the States menu, you will see which subgroup is associated with each bone. The two subgroups between them define a maximum and minimum number of triangles which the bone can control: using these two settings, Imagine can determine which triangles can be deformed when the bone is moved or rotated.

Using Bones

The obvious use for Bones is when you need to animate a human or animal figure. However, Bones can be used in other situations too: for example, try creating a bottle object, applying Bones to it and using these to animate the bottle jumping around. The bottle will move in a most unrealistic way, as its surface stretches and contracts. In fact, it's an effect you see all the time in TV advertising. You know the sort of thing: a carton of milk leads a breakout from the fridge as an army of yoghurts, tomatoes and cold cuts bound across the kitchen to make a break for freedom via the catflap. Or was that just a dream I had after eating too much cheese before bed? Well you get the idea anyway.

Once you've got bones sorted, you breathe life into any inanimate object. A more mundane angle on the technique is often employed by those rendering the now rather outdated corporate logos, which twist, stretch and squirm around the screen at the front of company presentations and the like.

Take it to the other extreme and you can animate faces, with one expression morphing into another, as the 'muscles' are pulled around by each other to move mouth corners, eyebrows and other features.

Starting with the simpler tasks is recommended though, as with most things.

John Kennedy

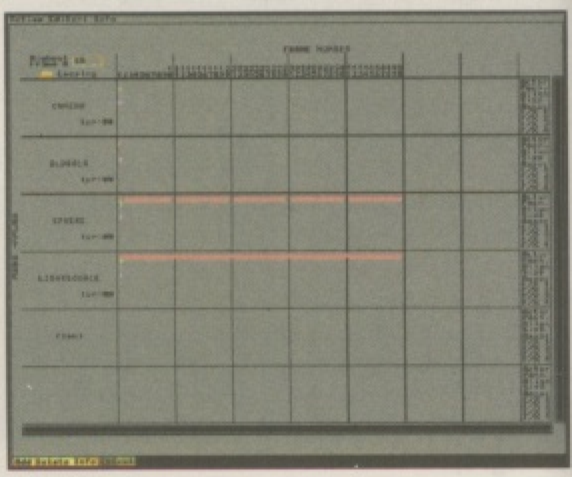
Animating Bones

You can continue to move the Bones, update the shape and create new States until you are happy that you have captured all the possible positions that the you will want the hand object to assume. Remember, each State will capture the current position of all the fingers.

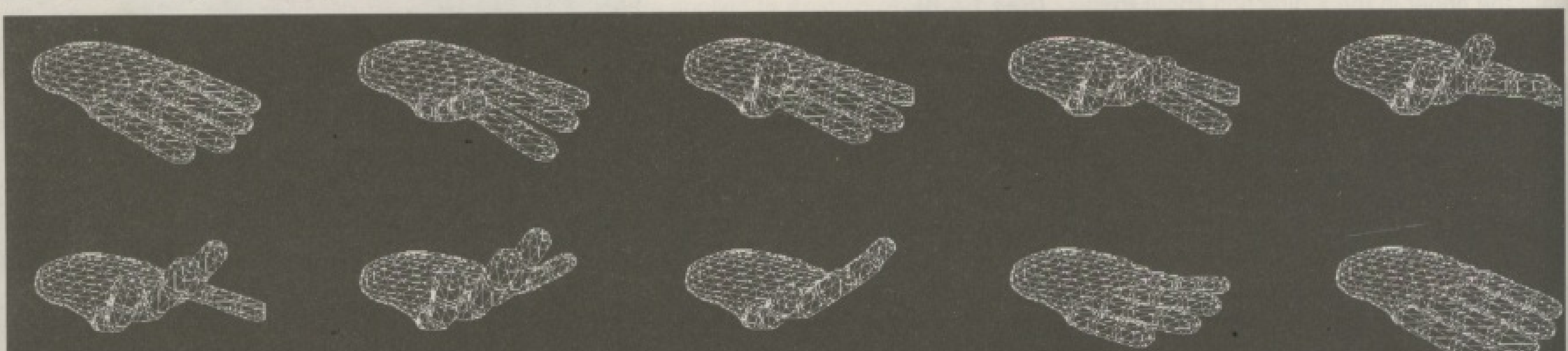
To animate the hand, you perform the same steps which we used last month animating objects with multiple states defining their colour or physical attributes. From within the Action Editor, create a single instance of the Hand object, but then select the object in different states for different ranges of frames. For example, in a fifty frame animation, you could give ten frames to each of the four fingers curling up, and the last ten to them all returning to their default positions.

When you animate this scene, Imagine will automatically work out the 'in-between' steps and move the fingers accordingly. You should try mapping a texture onto the hand to see if the skin stretches and contracts in the way you would expect.

If you want to know what the animation will look like without rendering the entire scene, or in fact, without leaving the Detail Editor, use the 'State Anim' option from within the Detail Editor as this will preview the changes between the States and let you watch them in motion.



▲ Use the Action Editor to merge the hand between its States.



Stills from a wireframe animation of the hand moving.



▲ Stills from a scanline animation of the hand in action.

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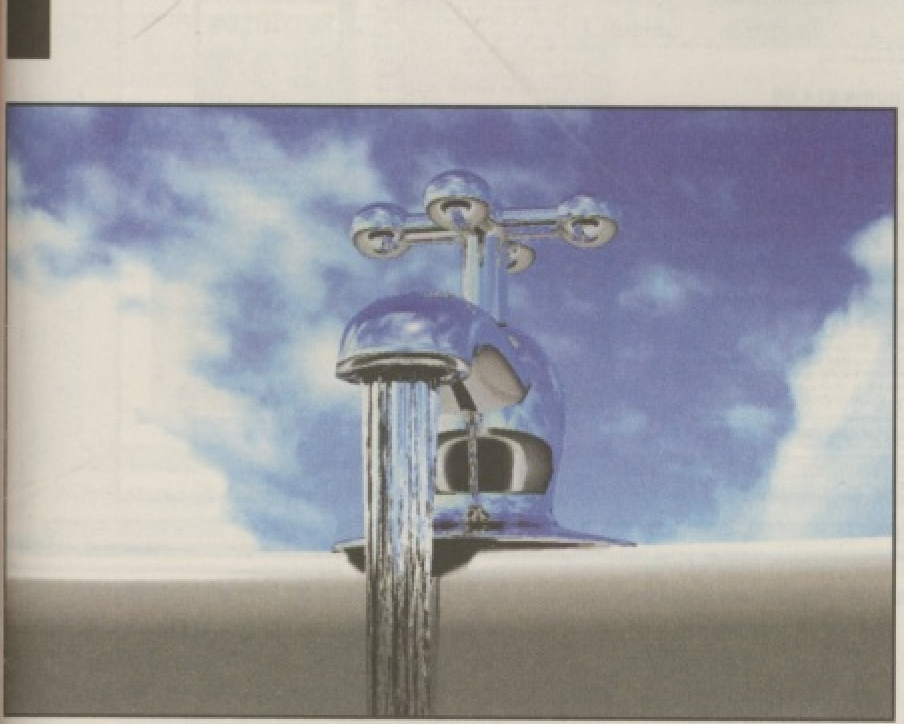
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Desktop Publishing

PART 3

When is a DTP package a word processor and which one is right for which job? Find out in this month's DTP masterclass.

There are two main types of packages you can use for desktop publishing; a word processor and a page layout program. The differences between the two are fairly minor these days. At one time, a word processor was only capable of putting plain text onto paper but now you can happily mix text and pictures to produce anything from a letter to a thesis.

Which begs the question, which type of program, a word processor or a DTP application, should you use for what task? The answer is not a simple one because we all like to work in different ways. What I would suggest is that everyone has both types of program so they can use which ever one they feel is better for the tasks undertaken.

Word processors

A word processor (such as Final Writer or Wordworth) is a column based application. Instead of having linkable text frames that sit on top of the page (like a DTP app), the column or columns in a word processor are built in to the page and are only editable by changing the attributes for the document.

You can of course have stand alone text frames in a word processor (tables in Final Writer 5) which with pictures, can be placed anywhere on the page, but the text frames cannot be linked. This method of working is both the word processor's weakness as well its strength because it enables you to create structured documents like letters and reports very easily even though it doesn't give you the flexibility for positioning objects that you get in a DTP program.

A word processor is also lacking in areas like PostScript, where support for colour separations is non-existent. They could also do with a multitude of graphic import filters (not datatype support), as well as high end text formatting functions like kerning and so on.

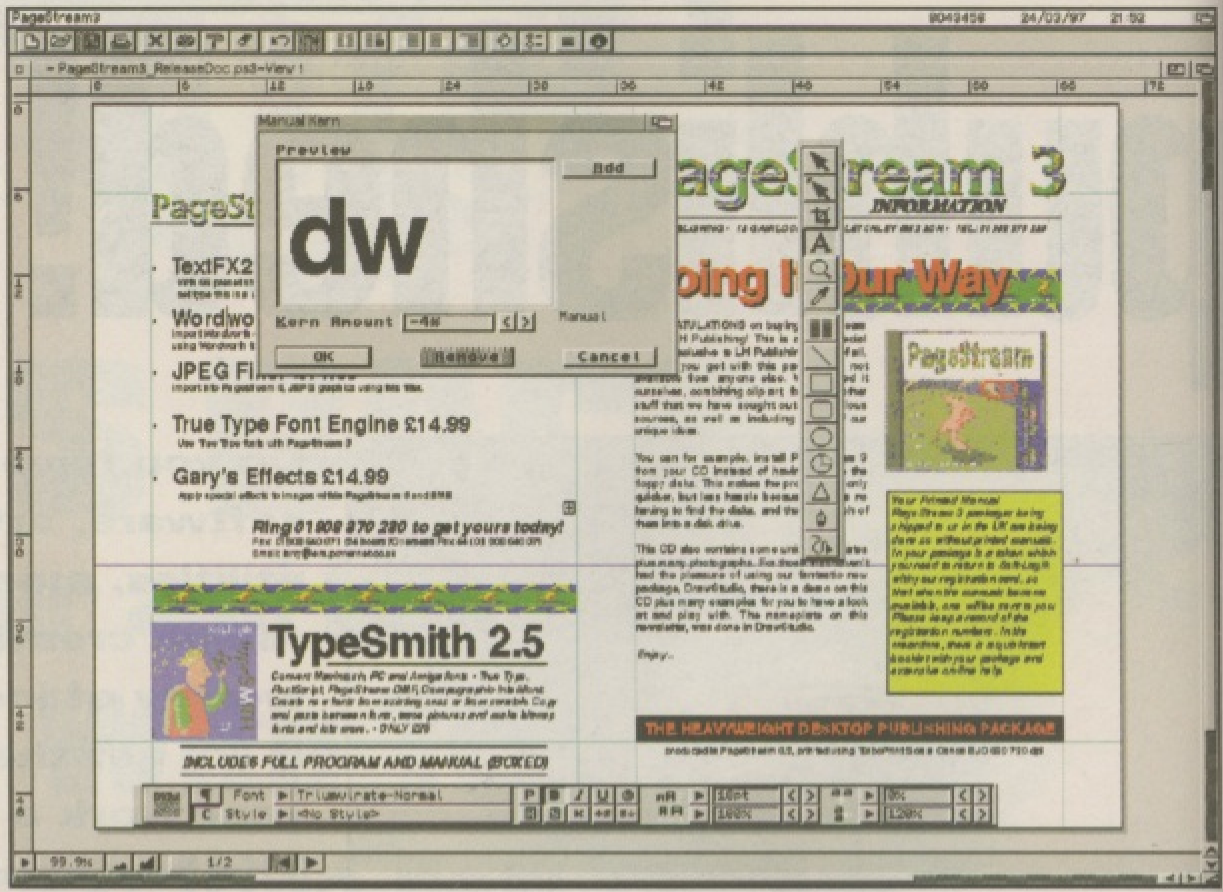
Desktop publishers

A page layout program (commonly called a desktop publishing application) like Professional Page and PageStream, differs in that the blank page is just that, completely blank. Before you can place lots of text on it, you need to create text frames to hold that text. This requires a certain amount of planning, but with it comes flexibility in the way you can alter the way the text is presented. Text in shapes for example.

Desktop publishing programs, however, have their own shortcomings. To check the spelling in the majority, you have to send the text to an editor and DTP applications certainly don't come with such niceties as auto correct and a thesaurus.

This is why I prepare text in applications that do have these functions, word processors, and then lay the text out on the page in a dedicated program for that job. It may sound like it would take longer to work this way, but once you know your applications inside out, these tasks are completed very quickly.

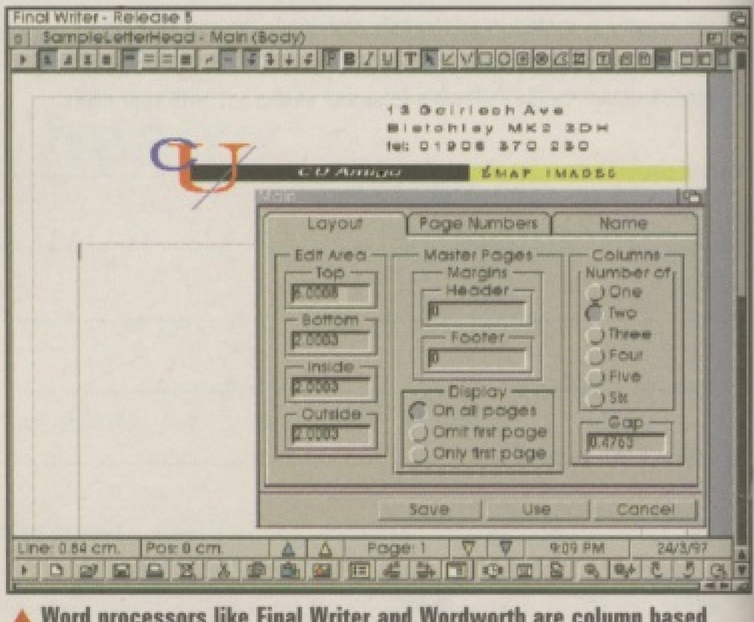
This still leaves unanswered the question of what sort of documents should be done in what type of application, so let me give you some guidelines starting off with letters. Remember, these are purely personal thoughts that have been arrived at after years of creating documents ranging from newsletters to colour adverts and complete magazines.



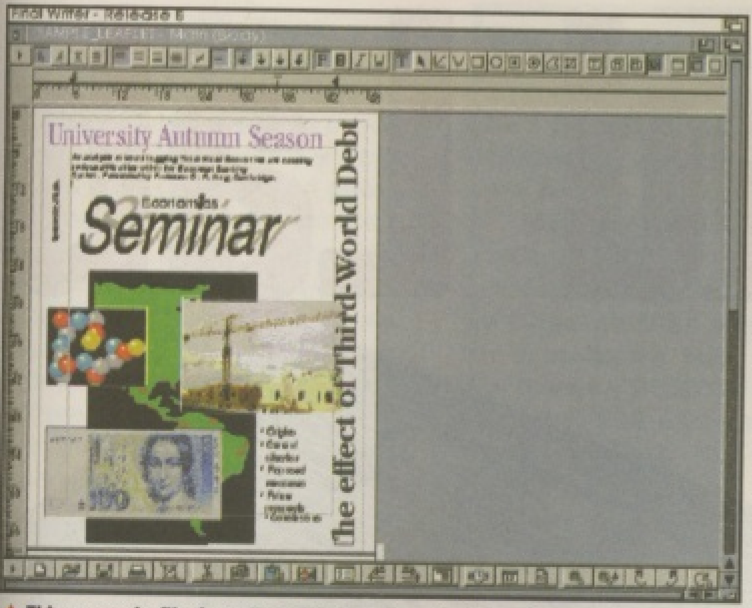
▲ **Desktop publishing applications like PageStream 3 and ProPage, have far better functions for kerning text, essential for the professional publisher.**

Letters

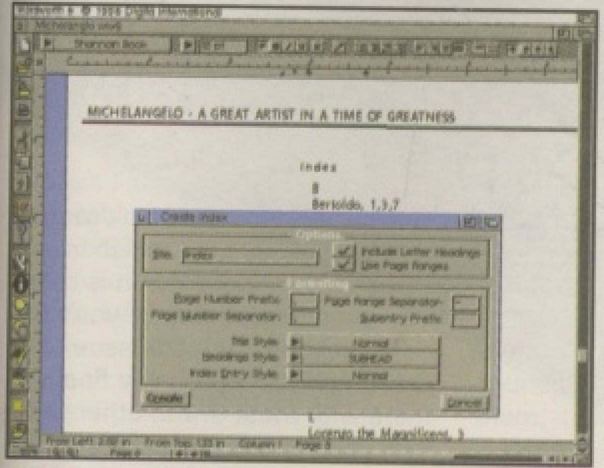
Most people will use a word processor for this. That's because it's probably the quickest way to do the job. The advantage in using a word processor is that once you have your own template set up with all your particulars, it's simply a matter of opening the template and starting to type.



▲ **Word processors like Final Writer and Wordworth are column based programs where the areas for text insertion are built into the page.**



▲ This example file from Final Writer shows just how far word processors have come in leaving behind their text only image of yesteryear.



▲ With features like Contents and Index generation, word processors are ideal for books and the like.

Reports

This is a borderline case. Because word processors have functions like endnotes and index generation, many of you will probably be happier with this type of application. Tables too will be a factor and word processors generally have better support for this as well. Reports are also generally more structured looking which is another reason for choosing a word processor.

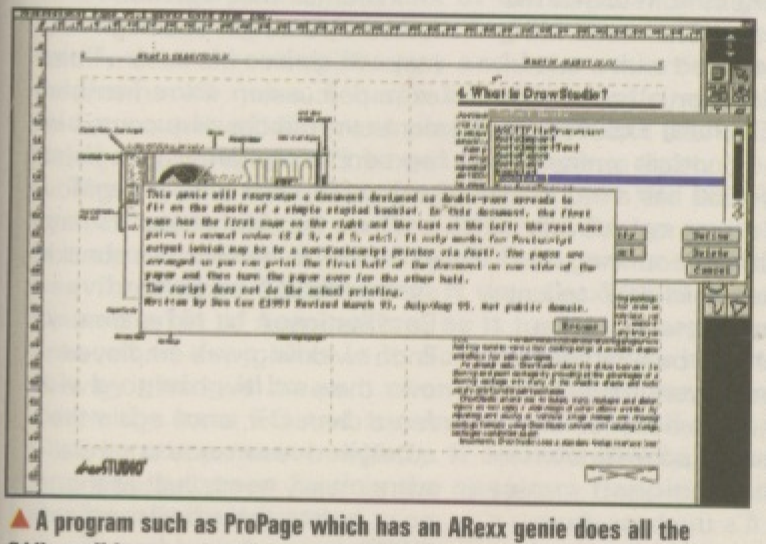
Posters

This is a hard one because to produce the best quality graphics, you generally need to print from a dedicated picture printing application like the ones that come with TurboPrint and Studio II. These don't support text though, so any text will need to be part of the image.

I produced some posters recently which only required a few words so I used Draw Studio for the text, exporting it as a bitmap, and then printed the words and the graphic from TurboPrint's Graphic Publisher. Because TurboPrint's Graphic Publisher supports multiple images, this was easy to do.

When Draw Studio supports 24-bit printing, something that is coming in the next few months, you will be able to create posters in it and print with the same quality you get from these picture printing applications. You can already do this in Art Effect which supports both TurboPrint and Studio II, as well ImageFX 2.6 which supports Studio II.

If your poster's images are not photographic, or maybe the poster only contains text, then you can do it in any application although I recommend a DTP package for this.



▲ A program such as ProPage which has an ARexx genie does all the fiddly stuff for you when it comes to pagination.

Newsletters/Magazines

These are probably the most demanding types of documents to create and because of this I recommend both types of applications for their creation. The text should be done in a word processor with all the tools you need for text creation such as spell checking and so on.

The pictures should be created in an appropriate application, then the whole lot brought together in a DTP package. The reason I choose a DTP application is because it gives you more control over how the page looks in the end.

Books

Another toughie this. I do quite a lot of manuals and books, and I choose a DTP application but at the end of the day, which application you choose will depend on a number of factors, the most important of which is how the page is to be printed.

This is important since if you intend folding the pages and then stapling down the middle (the cheapest method of binding), the pages when printed will need to paginated in the right order. Take an 8 page booklet which is two sheets of A4 folded and printed both sides. Although page 3 follows page 2, it's on a different piece of paper.

What most people do is to create the pages in the order they are to be viewed in the booklet (on a landscape A4 page) and then when they are ready to print, group all the objects on each page, and move them to the right place, so that when printed and folded, everything is in the correct order.

This is easiest to do in a DTP program. It's still messy but it's a lot better than cutting and pasting after printing and then photocopying the pages. That method works but the results of photocopying often leave a lot to be desired.

If you have a PostScript printer the job can be made very easy by using Professional Page and a booklet genie by Don Cox. This takes your careful crafted document, saves all the pages to disk as EPS files and then reloads them in the order necessary so all the pages print in the right place. If you don't have a PostScript printer, it is possible to use something like Post (public domain program) to do the same thing with a non-PostScript device.

On the other hand, if you're happy to use comb or wiro binding or even perfect binding using single pages, then whatever application you use won't matter a great deal. The advantage of a word processor is that most have index and contents generation, and after having manually created a few indexes in my time, I know this is a very useful function.

Publishing programs

When it comes to publishing, there are loads of packages you can use to help you out. Below is a list of some of the most widely used applications. There are many more, from shareware applications like Post to printing enhancement packages such as TurboPrint. If you want information on those not listed, call me on 01908 370 230 and I just may be able to tell you where you can get them from.

- **Wordworth 6 - Available from Digita International (01395 270 273). Word Processor.**
- **Final Writer 97 (Softwood) - Available in the UK from Softwood Europe (01773 836 781). Word Processor.**
- **PageStream 2 (Soft-Logik) - Available in the UK from LH Publishing (01908 370 230). DTP package.**
- **Professional Page 4.1 (Gold Disk) - Available in the UK from LH Publishing (01908 370 230). DTP package.**
- **PageStream 3 (Soft-Logik) - Available in the UK from LH Publishing (01908 370 230). DTP package.**

Leaflets

A word processor is well capable here but I would stick to a DTP program because of its greater flexibility. Generally, a leaflet will require the composition of lots of small elements and for that, PageStream or Pro Page will be more suitable.

Labels

Producing labels is quite common these days thanks to Avery and other brands of sheet labels. Again, a word processor can be used, but a program like Professional Page comes with genies that can create many popular types of labels; all you do is fill in the boxes.

Professional colour work

By this I mean full colour packing, magazine production and so on: definitely a job for the desktop publishing program. This requires supports for Pantone catalogue colours, separations and lots more high end functions. I'll go into this lot next month when we look at real desktop publishing where you can create the document on your Amiga and then have it printed on a printing press. ■

Larry Hickmott

Sound Lab

Find out how track 3 of this month's CD edition was created, and catch up with Dex and Jonesey.



If you have the CD edition of this month's CU Amiga, you'll find two audio tracks on the disc as well as all the usual software. These can be played on any normal CD player – you don't need a CD-ROM drive to hear them. Track 3 is called Catterpiller, a tune written and recorded by myself for the sole purpose of making people jump around like loonies at house and techno clubs. For the benefit of all of you with similar aspirations, this month's Sound Lab concentrates on how the track was put together, from conception to CD duplication.

The conception

As is often the case, the original idea for the track was rather different to the tune that I finished up with, but the basic theme still survived. Most musicians tell stories (true ones at that) about how they had piano lessons when they were a kid and could play the violin when they were still in nappies. Not me, although I did get a Casio VL-Tone for Christmas once. So with this in mind, inspired by a couple of very simplistic techno records, I decided to have a crack at banging out a tune that married simplistic melodies with an equally simplistic beat, but give it all a happy, bouncy kind of vibe.

So that was the general idea, next it was time to lay a few foundations.

If you take a look at the list of gear that was used to make the track, compared to a single Amiga and a stereo it might look fancy, but by the standards of most studios it's still quite rudimentary. Most of the equipment is fairly low-end (8-bit samples, entry level mixer, hi-fi monitor speakers, one 16-bit effects unit...) and if you use a lot of low-end gear together, you run the risk of everything blurring into a mess of noise. One way to avoid this is to keep each element of your music very clearly defined in its role. In other words, keep it simple – don't saturate any particular aspect of the overall sound.

Bearing this in mind, I thought it would be nice to ressurect that scratchy old bass drum/open high hat loop that graced many of the early house records, especially as that flanged open high hat can really cut through the mix, on a big club sound system in particular. Short of time and resources, I ended up with a compromise of a scratchy old bass drum and a rather crisper standard TR-909 high hat, which was good enough. A quick decision was then made that the two other most prominent elements would be a synth bleep between the bass drum and a wibbly kind of synth riff over the top, even though it ended up rather fuller than that in places.

Blow by blow

Moving roughly from the start of the track to the finish, here's an explanation of how each of the parts were made.

The gloopy intro sequence comes from the Cheetah MS6 analogue module, triggered as a MIDI instrument from within the OctaMED song. The mono MS6 sound was treated with a combination delay/distortion effect handled by the Yamaha FX500 via the Effects Send controls on the mixer. The FX500 has a mono input and a stereo output with automatic stereo bouncing on most effects, which is excellent for adding movement to what would otherwise be a rather plain sound. Tweaks were made to the filter cutoff and resonance controls to sweep it up and down for the intro.

Next up it's the bass drum. This is just an old 8-bit bass drum sample, which in my collection is called Slappy Kick. If you've got the March CD issue of CU Amiga you'll probably find it there with most of the other samples used in the track. No effects were used on this, although the sample itself has a little ambience of its own.

Here comes the robot vocal. Just the start of the "Electronic" sample is cued at the top of the four bar loop and passed through the same delay/distortion effect as the MS6. Shortly after, it's played right through with a slightly crude realtime time-stretch effect using my old favourite 'Sample Offset' command (number 19). This sample is played on the same Amiga channel as the bassline, which was not to be passed through the effects, so the Effect Send knob had to be turned back to zero once this part was over.

In comes that high hat, followed by an additional high hat loop which also includes a little extra percussion. If I remember correctly, the bassline comes in next and it all starts jiggling along and getting into a bit of a groove.

Once that bit has run its natural course, in comes that quacking synth riff supplied by the BassStation. A bit of realtime knob twiddling was employed over the next few bars to give it more character, once again the cutoff and resonance controls were mainly used. Just at the point before this riff comes in, the FX500 was switched from the dis-

Psst!
Do you A&R for a decent record label? Wanna sign up this track for a proper vinyl release? If so, contact Tony Horgan on 0171 972 6758 during office hours and we can talk turkey.

tortion to a reverb setting, through which the BassStation was also passed.

After a while it breaks down to the BassStation on its own, then builds back up again and goes on its way in a similar vien to the earlier section, before breaking down a second time. This time the Cheetah MS6, which was previously playing the gloopy sound from the intro, is switched to a different sound to play the rhythmic melody. The long and the short of it is that the rest of the elements come back into play again, with the addition of some string chords from the chronically un-hip Yamaha PSS790 home keyboard (which also helps out with the crash cymbals throughout the track).

The kit list

Catterpiller was created and mastered using the following equipment:

- **1 Amiga 500 with Chip RAM upgrade**
- **OctaMED 4**
- **Novation BassStation**
- **Cheetah MS6 synth**
- **Yamaha FX 500**
- **Yamaha PSS790 keyboard**
- **Spirit Folio Lite mixer**
- **Philips DCC 730 recorder**

Monitoring system:

- **Technics hi-fi amplifier**
- **Jamo hi-fi speakers**
- **1965 black & white TV**

The DCC master was then transfered to CD via a Toccata 16-bit sound card and actually cut to the CD master with MasterISO.

Mixing and mastering

A Spirit Folio Lite mixer was used to combine all the instruments. It's a brilliant little starter mixer with four mono inputs, four stereo inputs, balanced microphone inputs, inserts, high and low EQ on each channel and two effects loops. Spirit have just discontinued it, but if you're quick you might be able to pick up one of the last of the old stock for as little as £150, as I did very recently.



Sound monitoring in my home studio was handled by an old second hand Technics amplifier that cost £35 and a pair of second hand Jamo speakers that cost around £80. Mixes were mastered to DCC on a Philips DCC 730 which is now selling for £219 new. These recordings were then tested on a couple of alternative hi-fi systems to check the balance of the sounds and the EQ levels.From there, it was recorded to hard drive and cut to the CD.

Tony Horgan

Bassline flapping

The trickiest part of the mix of Catterpiller was getting the bassline right. After deciding on the bassline pattern itself, then throwing it away and later reverting to the original once more, I had a bit of a wrestle with the mixer and a couple of different playback set-ups (including 'very loud' and 'very quiet') to get it sounding right.

The trouble was that the bassline (not the introductory synth line) is played on two different Amiga samples. One is a short 'spikey' kind of synth bass, while the other is a heavily filtered TB303 note. It was the TB303 sound that caused a bit of commotion, as it had an exceptional amount of deep bass in it. Fortunately I was able to tweak this by giving it its own channel on the mixer, turning down the bass EQ and turning up the overall channel volume to compensate slightly. It sounds simple, but it was a fine line between having the speakers flapping and losing the bassline altogether.

Dex and Jonesey

UPDATE

Back in the summer of 1996, two DJs from Kent burst onto the dance music scene with their chart friendly remix of Josh Wink's Higher State of Conciousness. Since then, that mix has managed to project what was originally an underground classic into every pub jukebox in the land.

After such apparent overnight success, and on the back of what was already a massive track, have they managed live up to their promising start? I took a trip down to leafy Welling to find out.

The short answer is yes. A glance at the list of their remix assignments to date shows they have been busy boys indeed. If success of a remix team was based on the enormity of the original tracks they rework, then Dex and Jonesey have certainly hit the big time recently when they won the remix honours for last years Ibiza anthem BBE's Seven Days and One Week, which got plenty of exposure with its release on the flip of BBE's follow-up single Flash.

If, on the other hand, their success was to be rated on the names they were remixing, a similar conclusion would be met, with Phil Collins and Lionel Richie both getting thoroughly funked up by the pair. Then again, maybe you'd rather go by sheer volume of work they've attracted, which is approaching a total 20 remixes and countless DJ bookings. Whatever, the acid test is the effect their tracks have on a dancefloor, which could reasonably be decribed as devasting.

But Dex and Jonesey aren't just remixers. In fact, their last release, The Beginning, was charted as number one record of the year by many a top DJ. As you can see from the track list, they've got plenty of other original productions on the starting blocks too, which you can expect to hear in the more banging clubs and radio shows over the coming months.

It was good to see that the boys were still the same people, and have obviously enjoyed their last year, the cut and thrust of the record industry failing to dampen their enthusiam one bit. As for their Amiga set-ups, the remixes have paid for a few additions, but the core is still the same: two Amigas, ProTracker and a TV (just the one). To this they've added a very desirable Spirit Folio SX mixer, a new DAT recorder and a DigiTech Studio Quad effects unit. We hope to have a track from Dex and Jonesey on next month's CD.

Original productions

The Beginning, Chariots of Fire, The Anthem, That Piano Track, In The House, Check Out The Groove, Nothing Can Stop Me Now, Piano Heaven.

Remixes to date

Josh Wink	Higher State...
Outrage	Tall and Handsome
Wildchild	Jump to My Beat
Partizan	You Drive Me Crazy
BBE Seven	Days and One Week
Phil Collins	Dance Into the Light
Lionel Richie	All Night Long
Reel 2 Real	Meuve La Cadera
David Morales	In Da Ghetto
Digital Blondes	The Antheum
Mr Spring	Voyager
That Kid Chris	Feel Tha Vibe
Loop Da Loop	Go With Tha Flow
United Nations Project	United Nations of House
Bass Bumpers	The Music's Got Me
Tyrant	Dirty Minds
X-Avia	Dreaming
Jonathan Riley	The Bass That Goes Boom
Mr & Mrs Smith	I Wanna Feel It



Wired World

This month's Wired World makes a return to the HTML tutorial to cover the advanced technique of Frames.



We came to the conclusion of the Wired World HTML tutorials when we reached Tables. Since then the Amiga web browsers have come along leaps and bounds with two of the big three supporting so-called Frames. So it's time for a revival of the HTML tutorial to show how to use Frames for your own Internet or disk based web pages.

Voyager-NG and IBrowse 1.1 now have good Frames support and AWeb II's is due any time now. Virtually all PC and Mac browsers also have Frames support. All of these are commercial browsers so if you want the best browsing on your Amiga, a purchase of at least one of these browsers is essential. Incidentally, we'll be reviewing them all head-to-head in the next issue of CU Amiga.

Justifiable Frames

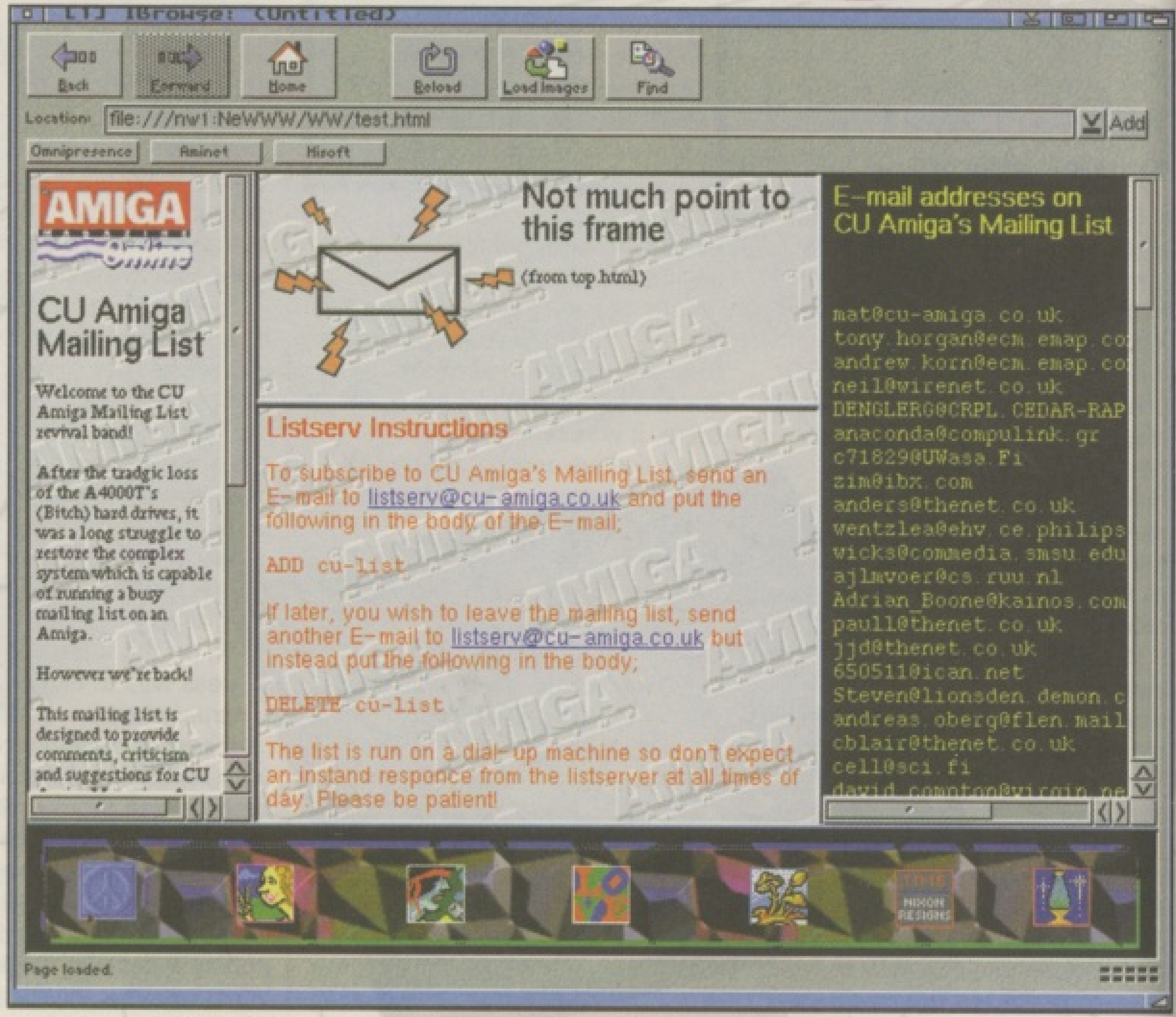
So just what are Frames? Frames allow multiple HTML documents in a single window, unsurprisingly in their own 'frames'. This helps solve the 'mile long document' syndrome as navigation bars can permanently reside along one edge of the browser window.

There are plenty of other uses for Frames. The easiest way to discover them is to use one of the new browsers to surf the web; in no time you'll see plenty of examples. From the outset it's clear that many sites over do it and considering Amiga screens can be quite small at 640 x 256 or so, we should be conservative in their use.

A frame document has no BODY tag at all. This is a major deviation from a standard document since the BODY tag normally starts the page after defining colours and background pattern etc. The difference is that our Frame document doesn't have any content at all. It simply defines the frames and points them to separate documents which will have the content for each Frame.

Let's look at how to place a simple static banner at the top of the screen. A Frame document takes the bodyless form as follows;

```
<HTML>
<HEAD>Our Frames Page</HEAD>
<FRAMESET>
</FRAMESET>
</HTML>
```



▲ **Here's an outrageously Framed up example of our HTML tutorial. One would hope that webmaster would be more conservative in their use:-)**

This is the basic structure of a Frames page, obviously the hard bit is the syntax for the FRAMESET tag which we'll be using; in fact it only has two attributes, ROWS or COLS. This defines whether the frames will be vertical or horizonal. In our case we want a Frame at the top of the screen, say 85 pixels high and another frame to fill the rest of the space. For this we would put the attribute ROWS="85,*". The * means that the size isn't specified so it will use the remaining space.

Defining Frames

Inside the FRAMESET tag we then need to define the Frames themselves. We want two in this case so there will be two FRAME tags. These match the values separated by commas in the ROWS attribute earlier. There's a few attributes for the FRAME tag but we'll just set the name and source HTML in this example.

```
<HTML>
<HEAD>Our Frames Page</HEAD>
<FRAMESET ROWS="85,*">
<FRAME NAME="Top frame"
SRC="top.html"> <FRAME NAME="Body
frame" SRC="body.html"></FRAMESET>
</HTML>
```

With this example we have the basics of frames. The first FRAME statement matches the 85 pixel height ROWS element in FRAMESET. The second has '*' so it will fill the rest of the window. The FRAME tags now have the name defined and most importantly, the name of the HTML documents that will fill the



▲ Here's a two Frame page; the source code displayed underneath shows the FRAMESET definition of two horizontal Frames.



▲ Making the leap to three Frames, notice that the first FRAMESET tag defines the left-most column 25% of the screen width. Nested within are the next two horizontal Frames.

specified Frames. To see it in action, all we need to do is create two really basic HTML documents and save them as top.html and body.html. They're exactly like any normal HTML document apart from the fact that you leave out the <HEAD> tag.

Let's see how far you can take Frames. It's possible to nest FRAMESET tags inside other FRAMESET tags, as in the following example;

```
<FRAMESET COLS="25%,*">
<FRAME SRC="left.html">
<FRAMESET ROWS="85,*">
<FRAME SRC="top.html">
<FRAME SRC="body.html">
</FRAMESET>
</FRAMESET>
```

What we've done here is specify an initial FRAMESET with COLS (horizontal) instead and used 25% of the Frame instead of an absolute value in pixels. Next the left-most Frame is defined with the first FRAME statement and pointed to left.html. Now instead of a simple FRAME statement for the remaining Frame, there's another FRAMESET tag. This lets us define further Frames inside the frame defined in the first FRAMESET tag.

This FRAMESET tag is our earlier one, defining a top Frame 85 pixels high and another Frame to fill the remaining space. It does as it did before except we have a Frame 25% of the screen down the left. See the screenshot above right for the results.

FRAMESET attributes

There are some other important attributes for the FRAME tag. Here's a list of them;

SRC="url"

The SRC attribute takes as its value the URL/path of the document to be displayed in this particular frame. Frames without SRC attributes are displayed as a blank space the size the frame would have been.

NAME="frame_name"

The name of the Frame is create so that it's possible to TARGET new data to this Frame by name. See TARGET later.

MARGINWIDTH="value"

The optional MARGINWIDTH attribute is used when the document author wants some control of the margins for this frame. If specified, the value for MARGINWIDTH is in pixels. Margins can not be less than one (so that frame objects will not touch frame edges) and cannot be specified so that there is no space for the document contents.

MARGINHEIGHT="value"

The MARGINHEIGHT attribute is just like MARGINWIDTH above, except it controls the upper and lower margins instead of the left and right margins.

SCROLLING="yes|no|auto"

The optional SCROLLING attribute is used to describe if the frame should have a scrollbar or not. Yes results in scrollbars always being visible on that frame. No results in scrollbars never being visible. Auto instructs the browser to decide whether scrollbars are needed, and place them where necessary.

NORESIZE

The optional NORESIZE attribute has no value. It is a flag that indicates that the frame is not resizable by the user. Users typically resize frames by dragging a frame edge to a new position. Note that if any frame adjacent to an edge is not resizable, that entire edge will be restricted from moving. This will effect the resizability of other frames.

Here's an example FRAME tag;

```
<FRAME NAME="test" MARGINWIDTH=10
MARGINHEIGHT=10 SCROLLING=NO NORE-
SIZE>
```

There's another tag called NOFRAMES for browsers that don't support them. A Frames capable browser will skip over the contents between <NOFRAMES> and </NOFRAMES>. So a typical bit of HTML might read;

```
<NOFRAMES>
This page uses Frames! You are
using a frame challenged browser,
please get Voyager-NG or IBrowse.
</NOFRAMES>
```

Targetting Frames

Lastly, the most advanced feature of Frames, is the ability to target new data to any of the Frames we've set up. This relies on the NAME attribute in a FRAME tag so that the Frame can be referred to later. Here's an example;

```
<A HREF="new.html"
TARGET="body">Click here</A>
```

If our initial FRAME definitions have a frame called 'body', we have an interesting result when the user clicks on the 'Click here'. The data new.html will be loaded into the named frame. This is extremely handy as it allows changing the content of any of your Frames without reloading in a new root document.

TARGET can also be used in FORMs and also Client Side Image Maps. Just place the TARGET="window_name", where NAME="window_name" is the same on your FRAME definition, after the HREF="url" attribute. If you don't specify a target window, the new document will be loaded in to replace your Framed up page altogether. ■

Mat Bettinson



Net God speaks

As many of you will know, CU Amiga's web site has been overhauled. It now requires a modern Frames capable browser, and sadly we've seen a few complaints. Considering that Voyager-NG and IBrowse 1.1 support Frames and shortly AWeb 3.0, what is the problem? There's even a demo version of Voyager-NG at http://www.vapor.com with Frames. Is it that a really good web browser on the Amiga isn't worth the asking price? Of course it is, and this Net God is certainly happy that Amiga browsers have reached this level with nothing but good prospects for the future. It's about time Amiga browsers stepped up a gear, so let's start using them and supporting them!

Surf's up!

This month there's a new HTML creator called Page Monster and CU Amiga gets a great new web site! It's good to be netted.

CU Amiga's new Web site

You could be forgiven in thinking that we'd forgotten about the CU Amiga home page. A number of factors contributed to the delays in updating it. However, we've now totally redesigned the site and it's bigger and better with a promise of regular updates and guest material every month. Do you need another reason to point your browser to http://www.cu-amiga.co.uk ?

The site will expand further in the coming months and we'd be most grateful for comments and suggestions. Please mail them to webmaster@cu-amiga.co.uk.

The new site requires a Frames capable browser and was specifically engineered to look the best on Voyager-NG and IBrowse 1.1. As of going to press, AWeb 3.0's release was imminent. Beta testers of AWeb 3.0 reported that it also works well with CU's site. Next month we plan to round up the Amiga's top three browsers in their latest incarnations and put them head-to-head in a gruelling review.

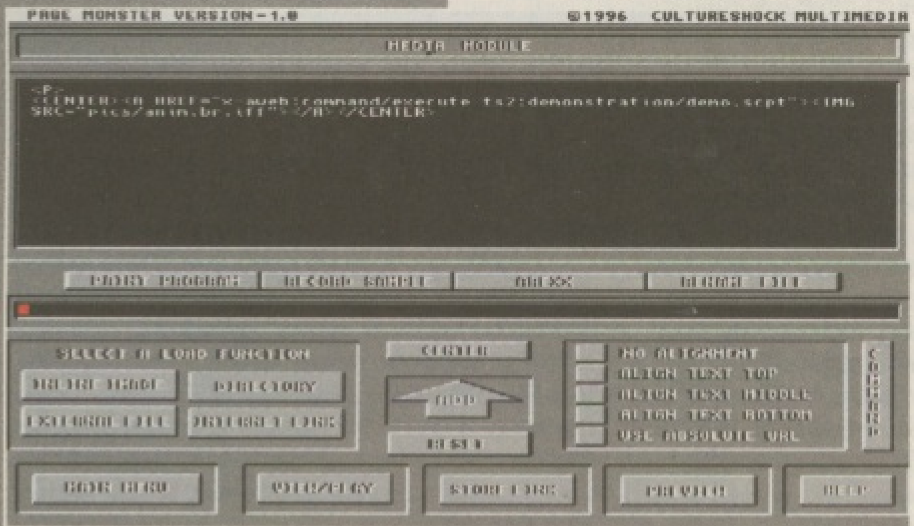


Netconnect released

Active Software's Netconnect package may as well read Vaporconnect. We're not being nasty by that, it's just that the package is based on all of Vaporware's excellent shareware. The Voyager-NG WWW browser, Microdot-II mail/news client, AmFTP FTP client, AmIRC IRC client are all there as well as AmTelnet, AmFinger and AmTerm. All of this software is the full registered versions and since they are all MUI based, the unregistered MUI is also included. It's some surprise that given the MUI bias, Miami wasn't chosen for the TCP/IP stack to round off the package. Instead a new version of AmiTCP, called v4.5 'dialup' is provided. Capped off with a front-end GUI to configure the system for a range of UK ISPs, AmiTCP's configuration complexities are bypassed. Netconnect sells for £49.95 and a demo is available from Active Software on 01325 352260. http://amigaworld.com/netconnect/



▲ Our new Web site in all its glory. Wonderful, isn't it?



Finale get Voodoo

Finale Development, developers of the forthcoming Final Web Cruiser, have taken over Osma Ahvenlampi's Voodoo E-mail client. Alain Penders of Finale Development, said that they intend to bundle a light version of the Voodoo package with their 'Finale Web Cruiser' browser when it is released. This would seem to hint that Finale Development intend to develop the functionality of their forthcoming browser package further than simple browsing. Voodoo was released in Amiga Technologies' 'Surf Pack' in December 1995, supporting MIME binary encoding and PGP built-in in a GUI environment for the first time for the Amiga.

Pagemonster HTML creator

CultureShock, a Seattle, Washington-based Internet and multimedia company, has released a commercial Web page generation tool called Pagemonster 1.0. Some of the boasts that the package lays claim to are: no knowledge of HTML required, digitized voice narration as on-line help, use of favourite graphics applications from within Pagemonster, storage of external links for later retrieval and the Forms Wizard which generates HTML Forms by just a few clicks of a button. The US$49.95 (+ US$5.00 P&P) package is detailed in full on CultureShock's Web site at **http://www.serv.net/~cshock/**



Surf of the Month

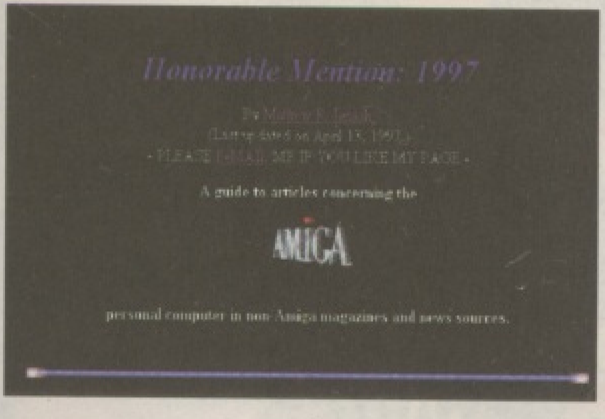
IBrowse, Voyager and Aweb battle it out in the surfing stakes in this month's journey into the world wide web.

The group Scoopex have been knocking around the demo scene in various shapes and forms since 1988 and are the crew responsible for the first ever Trackmo release with that corker of a demo, Metal Hangover.

I mention this because I recently bumped into the **Scoopex site** and had a nose around. The frames based site is well put together and has some nice graphics. The Scoopex news page is a bit alarming, e.g. "Deck sold his Amiga and bought a PC", "Oxbow moved onto the PC" etc. But no worries, the group are still releasing Amiga stuff and plan to continue. There is also a section on the site where you can download most of Scoopex's Amiga and PC releases and read the group's history. Mildly interesting.

More interesting is **The Aminet Programmers Index** whose purpose in life is to try to collect information about programmers that have submitted their work to the Aminet archive. A nice idea, but I am trying hard to think of what use this information could be. The site itself is set up using the Aminet file structure, game\demo\ etc. You can navigate your way around this pseudo Aminet and if a program displays an author info icon you can click on it and read all about him/her. So far 31 programmers have bequeathed their souls to the list. It would certainly help if the site was a bit more alluring; there are no graphics at all, (well, 2 icons to be exact) and the whole place is pretty unimaginative. All said and done though it's a free service should anyone need to use it.





Amicrawlers Amiga browser Watch is an interesting and continually updated page that keeps tabs on what Amiga browsers you surfers are riding. Currently **IBrowse** has a commanding lead with 73.9%, **Voyager** is a distant second (13.6%) just holding off **Aweb** in third with 11.7%. The two outsiders of the race, **Amiga Mosiac** and **ALynx** battle it out for a close last place with an unremarkable 0.3% and 0.2% respectively. I think over the next year Voyager will be making good headway on IBrowse.

Hmm, Amicrawler's graph seems to have blown a fuse graphically, as far as Alynx is concerned. According to the bar chart it is the second most popular browser. I think the author of Voyager could well disagree.

Also close by is **Amicrawlers Amiga Top Twenty Sites** which can throw up some worthwhile destinations. One of those sites in the top twenty is **Gateway 2000**, or Gateway 2K. The site is absolutely enormous, but expertly designed and so fairly easy to get around. The big disappointment is that there are only two small mentions of the Amiga and they are both press releases.

Before I go, an honourable mention to a site called exactly that, **Honourable Mention**. This most excellent site has a collection of virtually every Amiga related article printed in the non-Amiga press since the Amiga's inception. It's a very interesting and useful archive that is kept up to date, nice to look at, and easy to navigate.

We couldn't finish this Surf of the Month without pointing you in the direction of the new **CU Amiga On-line** web site, which has just be re-launched with a snazzy new look, new content and a completely new layout. The combined forces of our editoral and design teams have put together a site that aims to service all our readers with news, features, entertainment and downloads. Created by webmaster Mat Bettinson, it's one of the most efficient sites you'll find, which is good news for anyone with a slow modem.

Future expansions to the site will include a much wider range of downloads, more features, interactive surveys polls and lots of other good stuff.

You can E-mail the team direct from the site, so let us know what you think of it, and if you've got any specific suggestions for the site, E-mail Mat with your comments. That's all for now.

Steve Bye

Those sites in full

Scoopex:
http://www.ihi.ku.dk/~scoopex/
Aminet Programmers Index:
http://www.flevel.co.uk/aminet/index.html
Amiga Browser Watch
http://amicrawler.com/banners/
Amicrawler Top 20 Sites
http://amicrawler.com/spider/stats.html
Gateway 2000
http://www.gateway2000.com/
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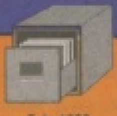
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HOW TO CREATE TOP CLASS AMIGA GAMES WITH YOUR MOUSE!

Have you ever dreamed of creating your very own Public Domain or Commercial software products without having to program?

Well now it is no longer a dream - it's REALITY!

REALITY - THE ULTIMATE SOFTWARE CONSTRUCTION KIT is a REVOLUTIONARY new product from B.P.M. Promotions, a company involved in the AMIGA software market for over five years. This product is a BREAKTHROUGH in software design and allows anyone with an AMIGA computer, regardless of their age or intelligence, to create both Public Domain and Commercial software products in virtually no time at all using nothing more than their computer's mouse! it can be used to create games, demos, educational software etc, much much faster and easier than ever before throughout the history of computers! REALITY is like nothing you've ever seen before on the AMIGA. Now for the first time you can access the awesome power of your computer with bewildering ease and use it to create TOP CLASS AMIGA software in few days by doing nothing more than clicking the buttons on your mouse or moving the mouse cursor around the screen - that's it! It's so easy you will not believe it! No programming is required whatsoever!

Here is a small example of what you can achieve in minutes with Reality by using nothing more that your Amiga's mouse:

- Create HUGE fully detailed scenery back grounds for your games using the background creation editors!
- Make your games main character shoot all sorts of different weapons each with different power values!
- Define monster attack patterns and choose from the HUGE amount of already made variations!
- Create intelligent enemies that home in on your main character!
- Add text messages to the software with hundreds of different styles of text fonts to choose from!
- Create SUPER intelligent GIANT mid level and end of level monsters just like the very best commercial games!
- Produce scenery that your main character reacts to : Ladders, Ropes, Platforms, Traps, Switches etc etc!
- Define complex puzzles to make your games much more interesting!
- Make other games characters that your main character can interact and communicate with!
- Select and define all sorts of weapons, bonuses and objects that your main character can collect and use!
- Create characters that have to fight each other in a beat 'em' up - STREETFIGHTER II style!
- Produce ALL sorts of demo effects from groovy text scrollers to on screen 3D rotation just like the very best PD demos!
- Create Educational software from a simple slideshow to a full blown disk magazine!
- Add graphics, music and sound effects to your software with ease!

THE LIST IS ENORMOUS!!!! - Test your software in seconds to see if everything is working the way that YOU want it to! There's no need for any slow compiling or testing like certain other packages!

REALITY can be used to create many types of different software products! It's ideal for TOP notch games! Create HIGH speed shoot 'em' ups, Addictive scrolling platform games, Beat 'em ups, Point and Click Graphic Adventures, HUGE Arcade games, Puzzle games, Racing games, Card games and much much more! Even create your own mind-blowing special effects demos or user friendly Educational software! Just look at the screenshots in this advertisement and see just what this system is really capable of!

Over four man years of work has gone into the development of this Software!
The result is:
A STATE OF THE ART SOFTWARE CREATION SYSTEM! It's ***versatile*** - it's ***easy to use*** - it's ***incredibly fast*** -It's ***the biggest ever breakthrough in Amiga software creation and has already been used to create twenty commercial games and a multitude of PD software!!***
If you can use an AMIGA you can use REALITY! All the hard work has been done for you! With once complicated programming routines reduced to simple mouse actions that anyone can understand! That's the hidden power of REALITY! Absolutely no knowledge of programming is required whatsoever Reality is unique! It is a completely new way of creating software!
MORE THAN TEN 90% SCORES HAVE BEEN AWARDED TO REALITY SO FAR FROM MANY DIFFERENT AREAS OF THE AMIGA COMMUNITY!

What you get!

The very latest version of the REALITY software construction kit which incorporates a whole batch of useful and essential utilities. These include: an Animation and Sound Studio, a Graphics toolkit, a Background creation system, Picture and Introduction creators, a FULL blown paint package, Text editing and disk utilities plus much much more! You'll also receive a fully detailed user friendly instruction guide and a handy hints and tips guide! Two further guides that will show you how to make two full blown games from scratch! Two full blown commercial games that have been created using REALITY for you to adapt and learn from! Issue one of the REALITY USER CLUB disk magazine! Two packed disks full of sound effects, music tracks and a MASSIVE amount of graphic images that can be used in your own software! These include characters, enemies, weapons, bonuses, scenery, fonts and MUCH MUCH MORE!! You get everything you need for creating your own full blown top quality software with ease!

You'll also get FREE membership to the Reality User Club!

This will provide you with a phone helpline, a penpal list allowing you to contact and work with the already -MASSIVE REALITY userbase from around the globe! You will also have access to a HUGE range of software that has been created using the REALITY system and 1000's of graphic images, sound effects and music tracks which you can use with your own software! We are willing to publish any software that you create using REALITY or if you wish you can have other companies publish your work! The REALITY user club can supply you with ALL the graphics, music, sound effects and ideas that you need to create superb software with this system. ALL the hard work has been done for you!

So what do you have to pay for this totally amazing system?

Only £29.99! This product is worth many times this price and only due to forecasted large sales, low cost advertising and direct sales to the customer are we able to offer it at this unbeatable price! By creating only one piece of software you should get your money back many many times over! How much software do you wish to create? What more can we say other than you would be crazy not to take up this very special offer! Creating software is much more interesting than using it, and REALITY is the perfect tool! Please note that the REALITY package is compatible with ALL AMIGA computers and is hard disk installable!

Screenshots of games created with REALITY



HOW TO ORDER

ALL AMIGAS

Please send a cheque , Postal Order, International money order to:
B.P.M. PROMOTIONS, DEPT CU6, 8 MAGNOLIA PARK, DUNMURRY, BELFAST BT17 0DS

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FAQ

Frequently Asked Questions

Power problems: too much hardware, not enough watts? CU Amiga can help.

Q. What size system can I power without resorting to a new power supply unit?

A. The answer to this question depends on so many factors: the individual PSU, the individual peripherals attached, how lucky you are... In general, you should start to consider upgrading the standard A1200 PSU if more than a hard drive and accelerator card is fitted. For example, if you have a SCSI interface, external floppy disk drive and a video digitiser as well as a hard drive and accelerator, you are pushing your luck.

Some CD-ROM drives don't have their own power supply, and borrow power from the A1200. In these cases I would definitely consider getting a new PSU. In general, the more you have hanging off your Amiga, the more likely it is that you will need to upgrade your PSU for reliable operation.

Q. How will I know that I need a new PSU?

A. Some of the symptoms of an over-stretched PSU include: the smell of burning, a very hot PSU unit, malfunctioning peripherals and unexplained crashes. If your Amiga crashes regularly, even when you aren't touching it, this could be a power problem.

Q. How can I be sure my Amiga is crashing because of a power problem rather than anything else?

A. Try using it with different combinations of all your most power-hungry peripherals, such as hard drives or external drives. Try to rule out individual components of your set-up. If the Amiga still crashes, it could be a problem with the Amiga itself, such as an overheating problem related to the processor or other chips.

Q. Can I use an A500 PSU with my A1200?

A. Yes, they are pin-for-pin compatible. The A500 PSUs seem to provide more power than those supplied with A1200s, and they are therefore worth trying. A500s can be picked up for a few quid these days, and the PSU and mouse can be used on an A1200. A500 PSUs are darker in colour than A1200 PSUs (not least because they become so grubby with age) and much heavier.

Q. Can I use an A600 PSU with an A1200?

A. Yes, although these PSUs seem to be even lighter and lower-rated than those supplied with the A1200. They are therefore a bit of a last resort.

Q. My PSU makes a faint ticking noise when it is switched on, but not connected to my Amiga. Is this normal, or is it going to blow up?

A. Well mine does it too. I don't think it's a good idea to leave it plugged in and switched on with no current being drawn, so don't try it.

Q. Can I use a PSU from a PC?

A. Yes, although you will have to sort the wiring out yourself. This can be tricky, not least because the Amiga has a non-standard power connector which is difficult to get hold of. You can of course use the one from your existing PSU. Use a multimeter to check the voltages very, very carefully. You will then have to find some way of housing the PSU, as most are not designed to be used outside a PC case. We covered some aspects of this, with wiring details, in part two of our tower conversion feature in the May issue.

Q. Will a tower system help?

A. Yes, as most tower systems include a separate PSU. Some tower systems are really only empty PC cases for you to house hard drives and CDROM drives. However, they come with a PSU which will save your existing Amiga unit from getting too hot and bothered. True tower systems which re-house your entire Amiga should definitely come with a new PSU.

Q. What happens if I get a PSU which has too much power?

A. The power rating (in watts) describes the maximum power which can be drawn, not the power which is supplied. The Amiga and its components will only draw the power that it needs. However, you must make sure you are providing power at the right voltage level. Mess up the 12 volt and 5 volt lines and it will hurt more than your Amiga's feelings.

Q. Where can I buy a new PSU?

A. Replacement and new, up-rated power supplies are advertised by various dealers (see the box below).

Q. Can I run the Amiga on batteries instead of a PSU, to make it portable?

A. You can try, although ordinary dry batteries (as used in torches, Gameboys and so on) won't last long enough to be useful. You might have more success with the batteries designed for use with laptop computers. However these are expensive. The Amiga was never designed to be battery operated, and its chips are greedier than those used in laptop computers.

Q. Do I really need to switch everything off before disconnecting leads for monitors, printers, mice and so on?

A. No, but if you don't you run the risk of damaging your Amiga by destroying a chip such as one of the CIAs. These are not easy to source or replace.

John Kennedy

UK dealers stocking PSUs

Dealer:	Telephone:
Power Computing	01234 851500
Analogic Computers	0181 546 9575
First Computer Centre	0113 231 9444
EyeTech	01642 713 185
Wizard	01322 527800
Siren	0500 340548

Logos, meanings and mysteries:

- **CD ROM** — CD32 queries, ParNET and various other CD-ROM-related problems.
- **Expansion** — All about upgrading RAM, operating systems and processors.
- **Accessories** — Plug-in hardware of any kind: scanners, disk drives etc.
- **Programs** — Answers to queries on particular pieces of software.
- **Sound** — Music, sampling, MIDI and anything that makes a loud noise.
- **Utilities** — Miscellaneous tools to keep your Amiga running smoothly.
- **Printers** — Form-feeds, page-breaks, preferences and lots, lots more!
- **Monitors** — Monitors, TVs, modulators, screen-modes and all that stuff.
- **Graphics** — Pixels, sprites, animation, pictures. In one small word: graphics.
- **Business** — Spreadsheets, databases, organisers, accounts ...
- **Comms** — Everything you need answering about the Internet
- **Help** — Not everything fits into a pigeonhole, but anything you like fits in here.

Q&A

Whatever the level of your technical problems, put them to our experts and we'll do our best to sort you out. Remember to give us as much info on your systems and problems as possible to help us help you.



Say goodbye to these chees-a-rama intros, they're going next month, we promise...



... thank God for that, I've been getting ribbed about these damned things for years now!

Where next?

My brother and I have owned a basic A1200 for a couple of years and we would like to expand our system to accommodate better games. We would also like to install word processing and spreadsheet software. What should our first purchase be – a hard drive, extra RAM or a monitor?

Graham Wright, Glasgow

Of the three you mention the monitor is the least important. It will allow higher resolution screen modes, which is not important for current games but makes word processing and spreadsheets a lot nicer to use. A fair few programs are happier running with some Fast RAM in place, but get an accelerator plus memory instead – the difference in cost is minimal these days. Hard drives are essential for software such as word processors and spreadsheets, and running multi-disk games from a hard drive is a million times nicer. Go for the hard drive first – you'll find you can fill any size in time but 170 or 340mb will suffice and can be obtained very cheaply. Then, as soon as you can, get a low end accelerator with 4Mb RAM. Power Computing are doing one for £89.95.

Sample dump?

Some of us can't afford CD writers or sound cards, so I have a few questions about Octamed Sound-Studio.

1. Can you save a 16-bit WAV file to disk even though it is a full song?

2. Can you take this file into a studio so they can load it into a PC and record it to DAT?

3. Can you load 16-bit stereo samples?

4. Do you think you could put audio sound samples onto the cover CD or put samples on disk for those of us without CD-ROMs?

Barry Walker, Livingston.

1. The question doesn't quite make sense but... yes, you can save (record) a whole song to disk as a WAV sample, by selecting the Disk options from the Mixing Options panel.
2. Yes, so long as you have the WAV file on a hard drive or other medium (such as a Zip drive) which can be read by the PC. The drive will need to be formatted accordingly.
3. Yes, SoundStudio can load stereo 16-bit WAVs, AIFFs and MAUDs, plus RAW and 8-bit IFFs automatically (it knows which is which) and also mix up different types within the same song.
4. Putting audio samples on the CD is a very good idea. We'll see what we can do.

A nice package

1. I have recently bought an A1200 with an Amitek Hawk 4Mb upgrade and would appreciate some advice. Being an artist, I was amazed at the graphical capabilities of the Amiga and would like to combine some animation demos with both music and sound effects. What software packages are the best for these specific uses?

2. Would I benefit from buying a CD-ROM drive?

1. Cartoon Studio by Marco Vigelius is very easy to use, does the job excellently and is a bargain for the £5 shareware fee. Check a PD library. Alternatively WildFire by Andreas Maschke is incredibly powerful but harder to use, more expensive and very big.
2. Your first priority is a hard drive. Trying to do animations is very limiting on floppy, and you'll have trouble using a CD-ROM drive without a hard drive. A CD-ROM drive will be inestimably useful however. For example our cover CD last month actually has both the above packages on it, along with hundreds of megabytes of pictures, animations, image processing software, graphics utilities, clip art etc.

Dumb salesman

I have an A1200 with a 200 watt PSU, a 1Gb hard drive, and a Viper 8Mb RAM card with an FPU. I saw your piece on CD-ROM drives and want to know where to get one. I tried PC World, and even though I showed them the list of compatible CD-ROM drives in the December edition, they told me they won't work on an Amiga. So where can I get myself a cheap CD-ROM drive?

Ed McCann, Belfast.

Whoever it was at PC World who told you that knows nothing about Amigas, and was fobbing you off with false information instead of admitting their ignorance. This is far too common in electronic goods sales. . All the drives in the list work fine, as does every 100% ATAPI CD-ROM drive.

Save my cat!

I am a relative newcomer to the Amiga and have this far managed to get along quite nicely in the battle to get to grips with the machine via a policy of dogged determination and always taking time to study the manuals ***(good man! – Andrew)***. Despite this I have come across a problem which has me kicking the cat. Please help if only for the cat's sake!

All I want to do is install some compugraphic fonts to my fonts disk so that I can use them with your excellent Design Works cover disk. Whenever I use the Intellifont tool, however, it refuses to work. It does nothing more than let me type into the text gadgets, neither can I access the on-line help, not, as the manual instructs, "...select OK..." as there is no OK button to select!

As a newcomer my machine is not yet expanded, although I have managed to install Magic Workbench and one or two other things such as a virus checker. In order to do this, I have had to delete some stuff from the Workbench that I don't use. Have I deleted something crucial to the operation of Intellifont? This surely isn't the case as I have even tried using my original Workbench disks and am no nearer having CG fonts in Design Works. I can't help thinking I have missed something and have promised the cat a good hefty kick at MY arse when I get to the bottom of this. Should you decide to solve this problem for me I shall cast your images in chocolate and... ***(we can't print this! – Andrew)***.

Andy MacDonald, West Lothian.

I am puzzled. I can't find any reference to "...select OK..." in the manual, and the help is built in and should work straight off. The purpose of intellifont is to convert CG fonts into bitmaps of a specific size to save space, but it is not actually necessary for using outline fonts with DesignWorks and similar packages.

Design Works, in common with most packages, will simply look for a volume – either a floppy disk or an assign on your hard drive – called fonts, and get its fonts from there. Install your outline fonts to a separate floppy and name that disk "fonts" and you can use that without deleting from your normal fonts disks. You will find that most public domain libraries will sell disks full of outline fonts which are ready to go, and this is probably your best solution in the short term.

The purpose of Intellifont is to convert CG fonts into bitmaps of a specific size to save space, but it is not actually necessary for using outline fonts with Design Works and similar packages. Each font comes with a directory, and files called name.metric and name.font. If these three things are copied to your font directories, Design Works can use the font.

Runaround...

In my efforts to keep the Amiga flag waving in Singapore (where I have recently moved from Canada), I have upgraded my A1200 to serve not only as a word processor and games player but also as world wide web browser and multimedia creator. I have an A1200 with a Viper A1230, 8Mb of RAM and a Surf Squirrel connected to a CD-ROM and Zip drive.

1. My accelerator gives off quite a bit of heat, making the whole trap door area hot. Is this normal? Should I do anything about it?

2. The machine will not boot when I plug the Surf Squirrel in. Instead it goes through some kind of endless runaround, attempting to boot Workbench on the hard drive, failing, rebooting, going to the hard drive and so on. If I plug the Squirrel in after boot up, everything is fine though. Does this sound like a termination problem? I have the Zip as the last drive set to terminated.

3. I have had some problems with the Zip drive, both on the A1200 and on my A2000 Toaster. It is unreliable, giving read errors, and often I get a loud clacking noise while the yellow light flashes for what seems like eternity. Does this sound like a defective device?

Yvonne Marlow, Salisbury.

1. '030 accelerators normally run hot. Unless your machine crashes a lot, this is not a problem, but it can only help to cool things down. Passive heat sinks can't hurt but a fan or even a peltier effect CPU cooler would be better.

2. The most likely answer is that there is something wrong with the way your devices are set up. Make sure that the CD-ROM and Zip have unit numbers which are different from each other and greater than 1 (0 and 1 are used by IDE devices such as your internal hard drive) and that the numbers you configured them with in software are matched to the numbers they are set to at the back of the drive. Also make sure that they both have a lower boot priority than your hard drive (remember low value = high priority and vice-versa).

3. It does sound as if it is probably faulty. Check it on an entirely different set up, such as a colleague's PC, just to make sure it isn't your software setup which is at fault.

Crash!

For Christmas I received an A1200 RAM board with a 4Mb 72 pin SIMM and a 28Mhz FPU. After installing it correctly I tested it by playing Worms, but to my surprise Worms froze on my second game. I loaded it again and the same problem occurred. I returned the board and received a new one, but the same problem occurred. I sent the board back again in case I had the bad luck of receiving two damaged boards, but still the problem occured. I have an A1200 with an internal hard drive, an external floppy and the Gasteiner RAM board.

Sean Crooks, Cleveland.

It is worth checking the placement of the SIMM in the RAM board. If it is a little loose, regular crashes are bound to result. Make sure that the clips are holding it properly in position. However the most likely answer is the old curse of Commodore, the overstretched power supply. The internal hard drive, the external floppy and the RAM board are all drawing power from that poor feeble Amiga power supply, and the chances are that it just can't cope. Try unplugging the external floppy and see if the problem gets better or goes away. If it does, then replace your power supply with a bigger one. The Wizard Developments (tel. 01322 527800) PowerBox supplies more power than you could ever need for £49.99, so get one of those and your problems should be over.

Corrupt pics

1. I have been using Imagine 3 and now 4 since you gave it away on your cover disk/CD-ROM, and am just getting the hang of it thanks to your wonderful tutorials. The boys in the office have just got brand new Pentium PCs for CAD/CAM and have asked me to render a 3D backdrop for Windoze95.

I have rendered two scenes but when I load them into ImageFX 1.5, another coverdisk, they appear corrupt and only part of the picture is loaded, although they load OK into Fastview. It is only Imagine pictures that I have trouble with, but not all of them. Have you any idea what is wrong?

2. On a spring clean of my hard drive I had a look at RAM:ENV and found a lot of prefs for programs I have tried from coverdisks and have deleted. How can I delete them and get a little RAM back?

3. Will PC multimedia speakers work on my A1200?

Colin Baker, Kent.

1. Fastview is likely to cope with certain images that ImageFX can't, especially if you have a more up to date version of Fastview. However, the ImageFX coverdisk should load anything that Imagine 3 or 4 produces, so I suspect your installation of ImageFX has lost something. Make sure that all the files in the ImageFX/modules/loaders drawers are there. The other possible cause of trouble is the IFFParse.library – make sure it is in your Libs: drawer.

2. You will find the archive for these files in the prefs/env-archive directory of your system disk/boot partition. Just delete them from there and they won't bother you again.

3. Yes, but they come with a small stereo jack socket, so you will need a simple cable converter.

How to write to Q&A ...

You can send your technical problems [or answers – Ed] to CU Amiga by the following means:

By letter to Q&A, CU Amiga Magazine, 37–39 Mill harbour, Isle of Dogs, London E14 9TZ.

E-mail: Q+A@CU-Amiga.co.uk.

We can accept letters or text files on floppy disk.

PLEASE DO NOT SEND SAEs. We regret that we cannot respond to queries directly, by post or over the phone, only through the pages of the magazine. We appreciate that some queries need quick answers, but we simply do not have the time to answer every query we get. SAEs go straight in the bin, so please save your stamps!

Masterclass

Perl is tipped to be the next big thing in programming languages, so what can it offer us Amiga users?

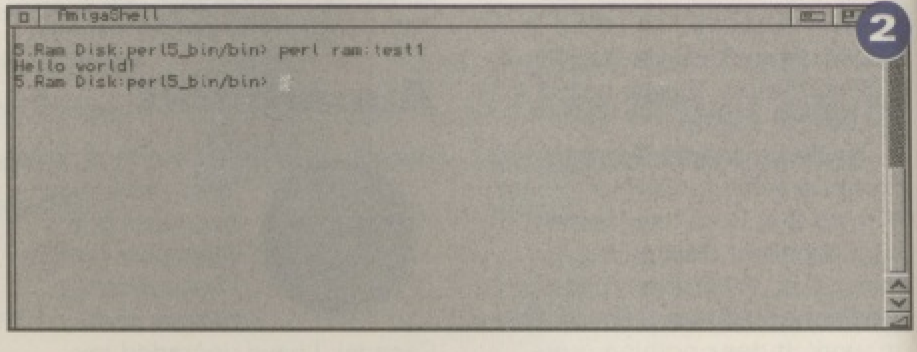
This month we're going to look at something a little special: a new programming language. The language is "Perl", and if you haven't heard much about it already, you will soon. Perl was developed by a gentleman called Larry Wall, and it's proving extremely popular with all sorts of computer users. Perl is said to stand for "Practical Extraction and Report Language", although it seems to be one of those cases of the name coming before the acronym. If you prefer, Perl can stand for "Pathologically Eclectic Rubbish Lister".

Perl is many things. It's a scripting language a little like ARexx, and it's terrific for developing scripts which need to perform common, but tedious, file maintenance tasks. Like ARexx, it's also a great language for gluing other applications together, and expanding their features. For example, Perl is currently enjoying favoured status as the most useful language for Internet applications. When you visit a web site, it could be a Perl script which runs in the background and provides new facilities and functionality. In particular, Perl's ability to process text strings and extract vital snippets of information makes it idea for dealing with everything from URL addresses to files of statistics and data.

Perl necklace

Perl is closely linked with the Linux operating system. Linux is a free UNIX clone available for all manner of systems, including 680x0 based computers like the Amiga, and Intel based systems like the PC. Like Linux, Perl is freely distributable and maintained and updated via a loyal gathering of users on the Internet.

The good news is that Perl is available the Amiga, and not only that, but the most current release is the widely respected Version 5, ported by T. Rulsson. You don't have to be running Linux to use this port as it is designed to be run under AmigaDOS – made possible because the C source code to Perl is available.



2

The bad news is that a Perl program looks rather different to any other programming language you may have used before. A particularly confused program may look as though your pet cat has walked over your keyboard. It's a little like C, a little like other UNIX shell scripting languages and a lot like gibberish. It soon starts to make sense though!

Where to get it

Amiga Perl can be obtained from the Aminet. The file you are looking for is "Perl5_002bin.lha". There is an associated file called "Perl5_002src.lha", but you are unlikely to need this unless you plan on re-compiling the Perl programs yourself. You can either download this file, or find it on the Aminet CD-ROM series. I located it on disk "d" of the Aminet compilation Set 3.

You might find that you need one or two other files and libraries too, depending on which features you plan on using. If you have installed some Internet tools you could find that you have all you need already, but be prepared to look around for extra files.

Using Perl

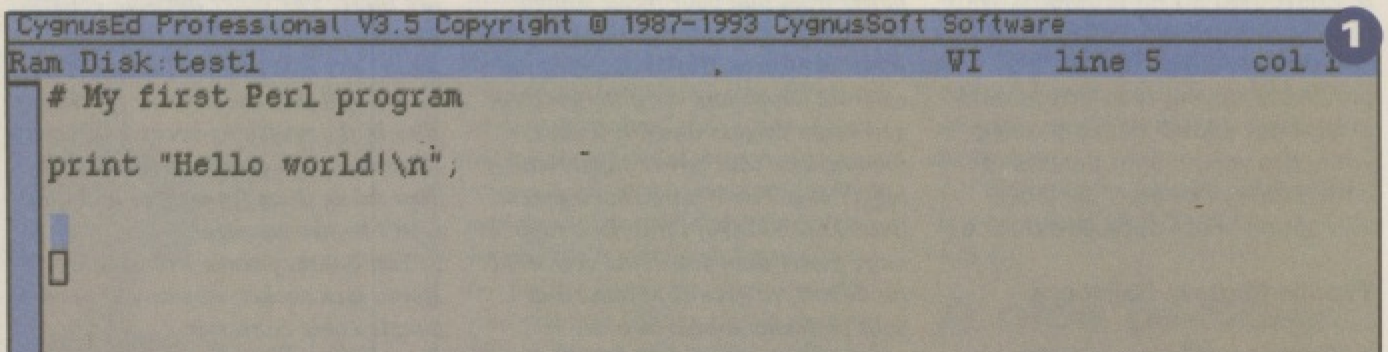
A Perl program takes the form of a plain text file, in the same way that an ARexx file is a plain text file. You start a Perl program by using the command "perl" followed by the program name (again, think of the ARexx command "rx"). Before your program runs, you may get an error about temporary files, so enter the following at the shell:

```
assign tmp: ram:
```

Now you are ready to enter your first Perl program. Using your favourite text editor, enter the following text, and then save it to RAM Disk. See fig1.

Excuse the lacklustre "Hello World" text printing example. Predictably, it doesn't do anything exciting, but it's traditional. Already you know a few things: comments follow hash marks, lines end in semi-colons and "\n" means take a new line. See fig2.

That's the hard part over with. If you can get this program working, you have successfully installed Perl and managed to create a suitable text file. You now



1

▲ The unwritten law that states "Your first program in any language must print Hello World to the screen" also applies to Perl, sadly.

have all the tools at your disposal needed to become an expert in Perl programming. In fact, you don't even need me anymore, as there's copious amounts of documentation included with the Amiga Perl port and more available on the Internet.

However, here are a few more vital pieces of information to help you get started. After you have tried these, look to the other documentation.

Simple programming

Variables in Perl are, well, different. You might be used to defining the "type" of a variable, but Perl only wants to know if it's a single item (such as a number, or a string of text) or a list of such items. The single item variable is known as a "Scalar", and the list as an "Array".

If you want to define a scalar variable, you must precede the name with the dollar sign. Don't get this mixed up with the use of the dollar sign to mean a string in a BASIC-like programming language. In Perl, all scalar variables have the dollar sign. Here are some examples of scalar variables: notice how you can mix strings and numbers. See fig3.

3

```
# Scalar variables

$x = 42;                                        # First value
$y = 1;                                         # Second value
$z = $x + $y;                                   # Create third from first and second

print $z;                                       # Display it
print "\n";                                     # Take a new line

$firstname = "John";                            # Create a string
$secondname = "Smith";                          # And another

$fullname = $firstname . " " . $secondname;     # Create a new string

print $fullname;                                # Display it

print "\n";                                     # Take a new line
```

You can see from this example how both numbers and strings can be added. There is a special "addition" function for strings to add (or concatenate) them together. There has to be, otherwise it would be confusing when you tried something like:

```
$first = "123";
$second = "456";
$add = $first + $second;
$cat = $first . $second;
```

Try this program to see what I'm talking about – the difference should be pretty obvious when you print out two variables "$add" and "$cat".

Because every variable is preceded with the scalar symbol, it's easy to include the variables within other strings. Here's an example (remember – everything following the "$" is a variable, and the value of the variable will be substituted for it). See fig 4.

When using arrays, you use the "@" symbol instead of the "$". Here's an example which creates an array called "names" and then assigns a list of names to it. This list is then used to assign values to other variables. See fig 5.

You can also address elements in the list in a more traditional way, like this:

```
$second = @names[1];
```

The elements are numbered starting with element 0, then 1 and so on.

There are other variable types too: for example, "hash" types which allow you to reference values with strings rather then numbers, like a miniature database.

However, sadly, that's all we really have space for here in this brief introduction. Perl contains all the usual programming language features, and you'll find plenty of commands for loops, conditions and file handling. You'll find all the details in the text files included with the Perl distribution.

Perl is pretty darn amazing when it comes to pattern matching: it only takes a few lines to remove all the comments from a C program for example. This is possible using "Regular Expressions", but that's a topic which could (and does) fill an entire book.

Many Web pages make use of CGI (Common Gateway Interface) scripts to perform special tasks, and Perl is an ideal language. If you fancy getting yourself a job working for Internet-savvy companies (not a bad line to be in at the moment), make sure you spend some time getting to know Perl. The mention of it on your CV is particularly valuable at present, and that will only increase. ■

John Kennedy

Perl, Programming and the Internet

With so many computer languages to choose from, does the world really need a new one? Good question, but with new innovations (such as the Internet) there always seems to be a new language coming along to make things easier for us.

CGI (the common gateway interface) is a method of letting Web Servers (the systems which provide Web pages over the Net) execute programs in a variety of languages. Most servers will let you use Perl, or C and the with Microsoft getting involved in a big way there is now support for Visual Basic. Even Apple Web Servers allow scripts to be written in AppleScript (the version of ARexx for Macs).

Don't confuse these languages with Java, JavaScript and ActiveX. These languages were created to provide extra functionality at the browser end: the program (or Applet) is downloaded and executed locally. This is why an Amiga browser can happily (and probably unknowingly) run Perl and C CGI scripts, but won't yet cope with Java applications.

4

```
@names = ("Alan", "Brian", "Charlie");      # Create a list of names

($first, $second, $third) = @names;         # Use this list to give values
                                            # to three variables.

print $second;                              # Print the second name
print "\n";
```

5

```
$name = "John";
$message = "Hello to you $name I hope you are well";

print "The computer says $message and then stops..\n";
```

More Perl

For more information, check out the Perl websites at www.perl.com/perl and www.perl.org, and also the many Usenet groups. If you are a computer book person, the definitive volume is "Programming Perl", published by O'Reilly and written by Larry Wall, Tom Christiansen and Randal L. Schwartz. ISBN 1-56592-149-6.

Backchat

Make yourself heard: send your views and opinions to Backchat, CU Amiga, 37-39 Millharbour, Isle of Dogs, London E14 9TZ, UK. Or E-mail to backchat@cu-amiga.co.uk

Shifty 50



I was really pleased to see classics like Cannon Fodder in the 50 greatest games on the Amiga (CU Amiga, April 97 issue) but where oh where is Lemmings?

I mean, I recall when this magazine was really commending Lemmings. You even compared your best game ever – Worms – to Lemmings. OK, there's no real relation between a game where you kill everything in sight and where you stop the little things dying because they've got no brains, but Lemmings is a real good classic. What were you thinking of? The phrase "Oh no, no more Lemmings" seems suitable.

James Tague, Durham

'Availability' is the key word here. We harassed all the major (and minor) Amiga game suppliers in the UK to make sure all of the games in our Best 50 Amiga Games Ever chart were all available for readers to buy, so certain classics are missing because they seem to have totally sold out. Originally planned was a section listing some of those games that didn't make the chart due to the availability factor. Among others these include Frontier, Rainbow Islands, Interceptor, Carrier Command, Thunderhawk, Starglider II, Dungeon Master, Super Hang On, Bubble Bobble, Megalomania, Hunter, Settlers, Silkworm, Xenon II, Sim City 2000, R-Type 1, Virocop...

There's almost enough there for another top 50! By the way, if anyone knows where you can get any of these, please let us know and we'll let your fellow readers in on the secret.

Esperanto crazy

During the last few years I have enjoyed the PD pages and often bought games and utilities on the strength of the comments there. However, I think Andrew Korn should refrain from commenting on a subject he obviously knows very little about. I refer to his comments on Esperanto (CU Amiga, April 1997). Esperanto is a language created by Dr Ludovic Zamenhof in 1887. His idea was that everyone could learn Esperanto as a second language and be able to communicate, as an equal, with anyone, anywhere in the world. Growing up in Bialystok, in Poland, he saw that the problems between Russian, Polish and Jewish communities were caused partly by their inability to understand one another and their unwillingness to learn one another's language. He reasoned that, if everyone could learn a common neutral language, no one would be at a disadvantage when speaking with foreigners. It was not a "crazy notion".

Esperanto is not an academic curiosity and 90% of Esperantists do not speak English. If Andrew Korn thinks it is a failure, he should try attending one fo the Universal Congresses, held every year (this year in Adelaide), where thousands of people from all over the world meet and talk to one another in Esperanto.

Something Andrew Korn did get right is that Esperanto is very easy to learn; spelling could not be simpler, pronunciation is regular (each letter has one sound only) and there are no irregular verbs.

I realise this letter has nothing to do with computing in general, nor with the Amiga in particular, and I don't expect you to print it, but I had to write, as ill-informed comment makes me angry.

Brian Withers, Bristol.

Go on, get netted!

letter of the month

I am writing to all you Amiga owners out there who are feeling disillusioned, and are on the edge of buying a PC. I found myself in a similar situation. For a long time, I had wished to get myself connected to the Internet, but in spite of all the helpful articles in this and other magazines, the process seemed complicated and full of pitfalls. Very fond of my Amiga though I was, it seemed to me that the only seamless way to get on-line was to fork out £1500 for a PC and get the Internet ready version of Windows.

I had access to a PC at work, and was used to Windows, although I don't like it. All the letters and comments you see telling you that Workbench is better are right. An Amiga with a hard drive and a decent version of Opus (I still like 4.0), is easier to use than Windows, and lots more intuitive.

Eventually, I just balked at parting with the dosh, and being a skinflint at heart decided to try the Internet the hard way, expecting heartbreak and sleepless nights as I tried to configure the software, and deal with an ISP who thought the name 'Amiga' referred to a cheap Spanish wine. So now to the point...

If you're in the same situation go ahead and do it! It was completely trouble free, took me only a couple of hours to sort, and has transformed my ageing system into a truly remarkable connection to the rest of the world. I now have unlimited access to more software, information, contacts, newsgroups, and other Amiga related stuff than you can imagine. When Bill Gates asks "Where do you want to go today", suggest Aminet, there's no PC equivalent of the same calibre.

So, rush out, get Miami or Termite TCP (they are the easiest, even I got it right!). Try both IBrowse, and Voyager, which are excellent, easy to install, and so user friendly that you can read the manual later, to tidy up the finer points. Once you're on, you have access to all the comms software you'll ever need, for free, or for a small registration fee. Even 33.6k modems are available for less than £90. Don't sell your Amiga, don't buy a PC, wire yourself up to the rest of the world. Amiga comms software is now usable by anybody with even the slightest knowledge of the cream-coloured box under their finger tips!

Richard, Isle of Wight
<bonesy@enterprise.net>

Andrew replies: Before you get too upset, read what I wrote more carefully. When I said it was crazy, I was being ironic, as you should have guessed by the "even crazier, everyone ignored him" line which followed. I stand by my other comments – it is a failure in that it has NOT become the lingua franca it was intended as, and is spoken only by enthusiasts. Esperanto is indeed very easy to learn, but is also very flawed – better international languages have been developed since, including Ido, which is a rationalisation of Esperanto. Zamenhof was a greater visionary than he was a linguist.

Aborted A\Box?

OK, everyone else has had their say about the new A\Box thingy so now it's my turn. The A/Box looks pretty impressive but asking £1000 for it is a bit much isn't it? Wasn't the whole Amiga concept about an easy to use cheap home computer?

Well I don't think £1000 is cheap. If companies are going to charge that I can see people either sticking with their trusty Amiga or being very stupid indeed and getting a PC simply because there is a lot of software available for it. I think the best bet would be to make a new upgrade or a new Amiga, like they are thinking of with the PowerPC. What companies need to combine is the power/speed of a PC with the ease/multitasking and friendliness of the Amiga. Us Amiga users are tired of being mucked around with Escom and VIScorp. It's time to turn over a new leaf, get a new Amiga out and save us all.

Even if they muck up again the Amiga is going to be the very first computer which will keep on going and being supported. I know a lot of companies have left the Amiga scene but what about Vulcan, Mutation and the newly arrived Islona and APCTCP – they are trying to keep it going so I think we should help them by sending letters and E-mails of thanks and ideas for new high spec games. Also why not dig out those programming books and start making some great stuff for the Amiga and help it along on its rough journey?

It's time to pull together and join forces. Big companies have made their money and left, so now it's up to us to keep the Amiga going. Any comments on this can be emailed to Cool@Dcandy.demon.co.uk.

Chris Seward, emailsville.

To you, the Amiga represents a cheap all-round home computer, but don't forget the likes of the A2000, 3000 and 4000 and tooled-up A1200s, which to many are professional creative computers. The first Amiga was the A1000, which was priced out of most people's reach, but that spawned the cheaper A500. Who knows, maybe the same could happen with the A\Box. It may be unlikely we'll see a totally new 'Amiga' released for under £400, due to the costs of developing and producing new technology. The low prices of the A500 and A1200 were possible mainly because the technology had already been developed and put into economical production runs, thanks to their respective forerunners the A1000 and A4000. Still, the fact remains there is definitely a massive potential market for a cheap but capable home computer. Perhaps this is where Gateway are headed.

F1GP Enhancer

I would like to make a quick comment about F1GP from Microprose. I'm very happy that it was listed in your top 50 games (although disappointed that Stunt Car Racer was rated higher) and would like to advertise to your readers how the game can be improved.

Get F1GP Ed from the Aminet or a PD library. It allows you to edit *everything* in the game and now comes with datatypes for the 1997 teams. If you have an accelerator/Fast RAM you can alter the frame rate – the original game runs at 8 frames per second, but with my Blizzard 1230/IV it runs at 20 frames per second.

Buy a Quick Joy 'joy pedal' from Premier Mail Order (£9.99). It makes the game much easier to control – beat Damon Hill and Michael Schumacher in Ace Mode! If you do use F1GP Ed, use it on back-ups as it writes data to the boot-disks.

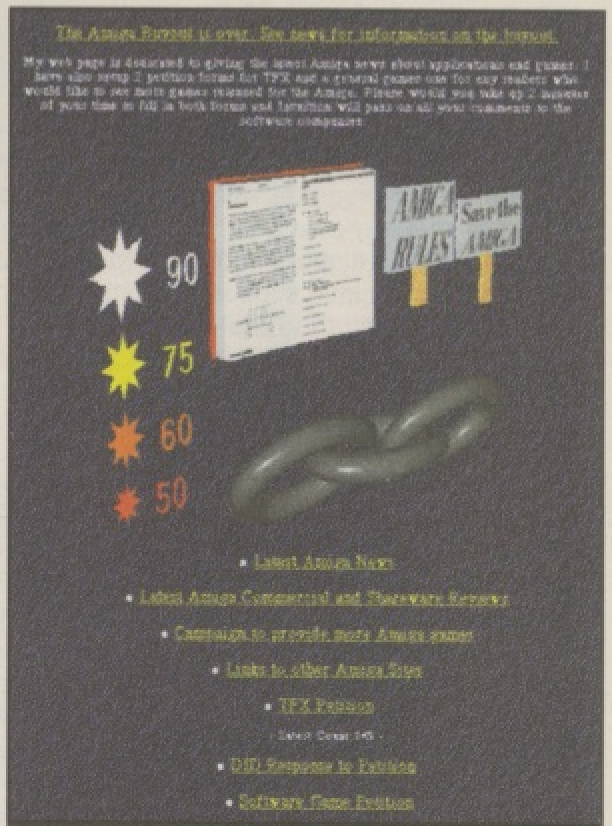
Also, referring to the top 50 games, considering Elite 2: Frontier recieved your highest ever rating (97%). I can't remember seeing it in the top 50 (although I am probably wrong – please ignore this paragraph if I am). I understand that almost a completely different editorial team made the decision for the top 50 when Frontier was released and opinions differ, but does the Frontier example perhaps suggest that since opinions differ so widely, the top 50 games was not such a wonderful idea as it is so subjective?

Nice idea to have the competition at the end though! Thanks for a great magazine and great CDs (I'm just off home to put DOpus, Print Manager, MUI 3.7 and Voyager on my hard disk). Thanks once again.

PS. I'm studying information/computing at Loughborough University. I am a *big* Amiga fan and just as big a Damon Hill fan – watch out for the number 1 plate on his Arrows car on March 11th.

Andee Clarke, emailsville

Thanks for those F1GP tips. Check out the first letter for the reason Frontier missed out on the chart. As to whether it was worth doing it at all, with everyone's differing opinions and the magazine's ever evolving staff (we began as single cell organisms during the early 80s you know), there is never going to be total agreement and anyway, we like a bit of a debate. Oh yes, can you spot the time lag between E-mail and magazine publishing? We seem to remember Hill's first outing wasn't quite the championship winning performance many hoped for. It just goes to show how far a good Williams Renault can get you... onto the starting grid at least!



Amiga Flame

Quake rocked

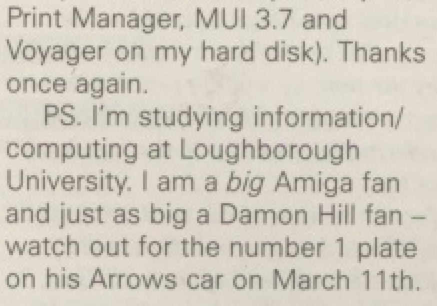
I just noticed the Amiga Quake site has been updated – well it's closed actually. I suspect it my be something to do with copyright infringement, but does anyone know better?

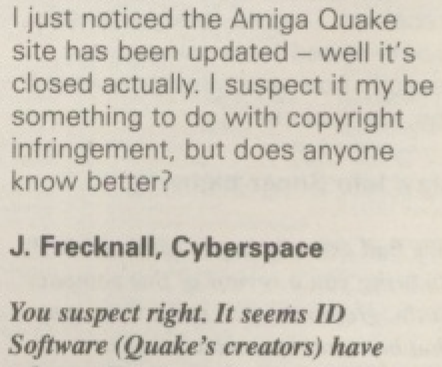
J. Frecknall, Cyberspace

You suspect right. It seems ID Software (Quake's creators) have taken a dim view of Amiga Quake (the unofficial Amiga Quake engine) and demanded it ceases distribution. Watch this space for developments though.

Amiga flame

I have a web page you might be interested in. On it I have put two petition forms for visitors to my page to fill in. One is a petition for


Quake: the unofficial Amiga version disappears.



Continued overleaf ►►►

the game TFX to be released by DID. So far I have sent off the first collection of 50 responses to DID that I have collected over the past two weeks. The other is a general Amiga games petition that will be sent out to as many past and present Amiga developers to tell them to either continue supporting the Amiga or return to the platform. Games like Putty Squad, TFX, Inferno, Big Red Adventure (now getting a release – Ed), Sim Tower, etc have been abandoned even though they might have sold well. I am looking for publicity for both petitions as I think they might be some help to the Amiga situation and, if I am very lucky, might even result in some of the games mentioned being finished and released. Would you please let your readers know about my campaign? The web link is as follows:
HTTP://www.infj.ulst.ac.uk/~cnw826

Ed Collins, Amiga Flame

Where's Graffiti?

Do you have any plans to review the Graffiti graphics adaptor? I am interested in this product, but I am a bit sceptical because of the limited amount of support it has received. I would also like to see some speed tests so I can see exactly how much faster it would be, particularly PCx.

Jay, Info Super-highway.

We had actually hoped (and planned) to bring you a review of this compact little 'graphics card' some time ago, but have not been able to do so because no-one seems to be willing to take on major distribution for it – even those who do list it in their product range seem to be unwilling to send it to us for review. Unfortunately it seems to be in a chicken and egg situation regarding software support, with few programs being written to use it. One solution would be for someone to start selling it in a package with some relevant software, which might be enough to get the ball rolling.

20:20 Cybervision

I got a little worried when I read Mat Bettinson's review of the Phase 5 Cybervision 3D board in the March issue. My Cybervision 3D arrived on the same day I read that review. But after installing the board in my A4000, all I can say is WOW! I could not be happier with this upgrade to my system. I don't know what revision of CybergrahX he had for the review, but the one I received worked with no adverse effects. He also didn't mention which mode promotion software he was using. This is a must, and ModePro version 4.18 does a super job of getting most of the software I have running under CybergraphX.

I will agree with Mr Bettinson that to get the most out of this board,you really need the Scan doubler/Monitor switch. Unless you plan to use two monitors, this little card allows you to run software that can't be promoted to a CybergraphX display. Brilliance, demos, and most games fall into this category. It's a sad state of affairs when I can't get my games working. On a side note, it kind of surprised me to read, in the monitor switch manual, that it can be used as a stand alone card. Seems like a cheap way to hook up a PC monitor.

Anyway, I love this board. It makes my Amiga run like a whole different machine. I'll bet that if Mr Bettinson tried this board with a later version of CybergraphX, it might fair better in a review.

Craig Nori, cnori@usa.net

The Cybervision 3D review was a difficult one; after we raised the subject with Phase 5, could we be sure that the software would be fixed by the time we went to press? Mat wasn't happy with the product considering it wasn't up to the standards of the former version of the card, or those of Phase 5 in general. Fortunately Phase 5 took heed of the criticisms. See the addendum in the Picasso IV review in this issue.

XCAD mad

I am writing to ask if there are any experienced XCAD users out there who could offer me some technical help or advice on how I can set the program up, as I have been unable to obtain the manual. XCAD users should write to me at this address:
Mr Tony McGartland
11 Lammy Drive
Omagh
Co Tyrone, BT78 5JB
Northern Ireland.

Home truths

A lot of speculation is taking place at the moment, and a lot of people seem to be pinning their hopes on some kind of mass Amiga revival, particularly in the games market.

In my opinion it's about time a few facts are faced. The Amiga was a great games machine in the late 1980s (I can still remember being amazed by Marble Madness and Defender of the Crown) but it has no chance of competing with the current games consoles or top PCs. The games that are reviewed in CU Amiga are laughable when compared to current Playstation titles. The defence of "It's playability that's important, not flash graphics" does not by and large turn out to be the truth. There has been a trend recently to release old arcade games compilations on the Playstation, but to my horror, the games that I remembered from my youth do not have lasting appeal today.

I think that the Amiga will survive, but not as a games machine. As a keen gamer I knew I would have to upgrade to play better games, but realised that the Amiga fulfilled all of my other computing needs. I therefore decided not to get a PC, but to keep my Amiga and buy a Playstation. I now feel I have the best of both worlds, a superb computer for the serious stuff, and I can play games that a Pentium would struggle with. Oh, and with the money I saved by not buying a PC I've upgraded my trusty A1200 with a hard drive, accelerator and extra RAM.

Instead of highlighting the Amiga's weaknesses with (sad) features like "The 50 Best Amiga Games Ever" (and wasting five editorial pages that could have been put to much better use – like a bigger Opus 5.11 guide), perhaps CU Amiga could devote its attentions to areas that would persuade a potential purchaser that the Amiga is a worthwhile proposition, like DTP, video, music, 3D graphics, animation, Internet access etc. No sane person would go out and spend £400+ on an Amiga to play Bograts! I am embarrassed when a work colleague flicks through my magazine and sees the games section. It just ruins the Amiga's credibility, a shame when a lot of the "serious" software is of such a high standard.

I think that CU Amiga (and the Amiga market in general) would be greatly improved if coverage of games was dropped in favour of great features like "Build Your Own Tower", which I though was brilliant.

Graham Robson, Cleveland.

To the Point...

No Go Show

I was somewhat purturbed to read in your April issue that TFX would be on display at the CU Amiga stand during the World Of Amiga Show in May. Sadly, I won't be tempted to visit the show on the off chance I'd actually get to see TFX. Frankly there's more chance of George Best turning up.

**Allan Brown,
AllanB@delfin.demon.co.uk**

A\Box poster?

Hi! Couldn't you put a BIG poster of A\Box in your magazine? I think it would be nice with some computers on my wall.

Erik Nylund, Maxmo, Finland

Nice idea. We'll see what we can do.

Floppies out

I should like to second Miguel Ramos's view that you should drop the covermounted floppy and only have a CD-ROM version of the magazine. If it encouraged PC owners to upgrade, it should do the same for Amiga owners, and this will mean that we should no longer have floppy-only machines holding the market back.

Ian Bell, Coventry

Fuming of Wakefield

In the March 97 issue I was fuming to see that the source code to AB3DII was given away on the CD edition. I don't have a CD-ROM and I don't see why people with disk drives should be left out. We're just as loyal to the Amiga, the only difference is we're not as rich. Could you please do something about this, like have an extra disk on the cover, even if you have to raise the price a little?

J Seeney, Wakefield.

There's a very simple reason why it wasn't on the floppy edition: it was well over 60Mb in size (that's 74 floppy disks, according to our CD-to-floppy disk conversion expert Andrew Korn). However, seeing as you're in Wakefield, as are Team 17, maybe you could pop down to their offices with 74 disks under your arm and see if they'll oblige. Well it's worth a try.

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For Amiga specifications, see EPIC Marketing's 2 page advertisement in this issue.

1

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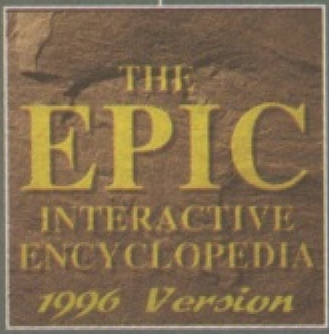
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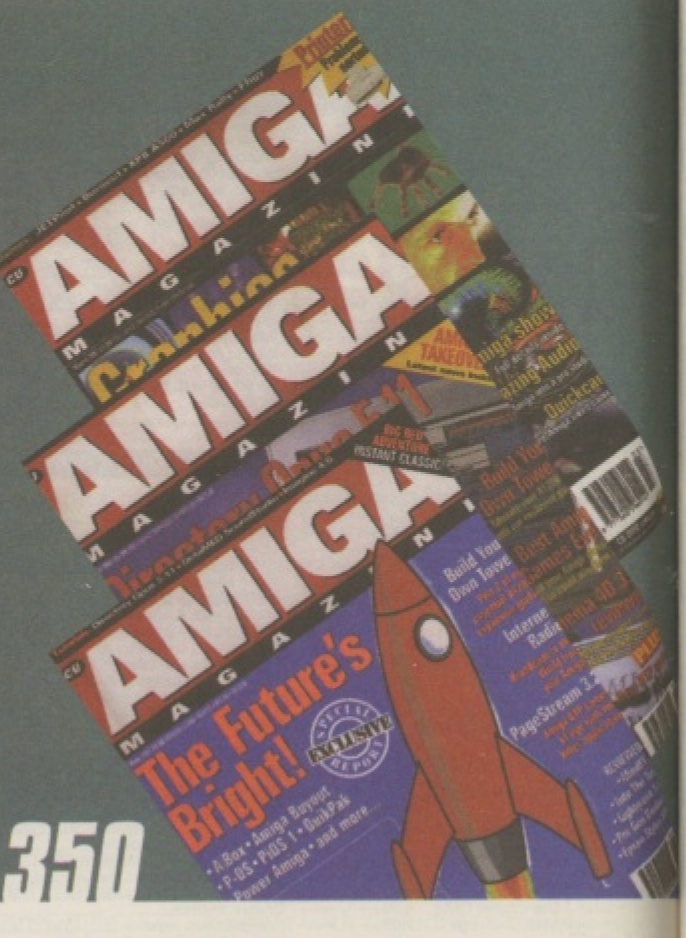
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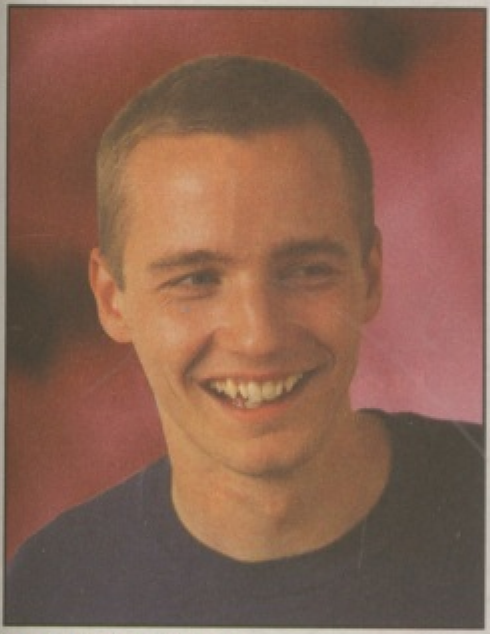
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Points of view

We would like to announce... nothing



by Tony Horgan

Who would have thought it? While the likes of VIScorp and QuikPak were shouting about their plans for the Amiga, the bovine camouflaged PC giant Gateway 2000 were waiting in the wings, doing their homework and preparing a bid of their own.

The big question is of course, what plans do Gateway have for the Amiga? It seems at this stage they're not entirely sure themselves. However, unlike VIScorp and QuikPak, Gateway seem to be taking a more considered approach to its PR, perhaps not wanting to be drawn on decisions that have not yet been finalised. Subjected to the kind of pressure the inquisitive Amiga community is capable of, it was predictable that the enthusiastic mouthpieces of VIScorp and QuikPak would divulge plans and goals that they couldn't guarantee would be followed through, especially since neither had actually secured a buyout deal.

While Gateway have been very tight-lipped about the whole affair so far, a representative did liken the Amiga acquisition to buying a box marked 'Stuff', on the basis that something in there would most likely be of use in some way. This is not really what we want to hear, but let's not get carried away – this single comment shouldn't be inflated to the official Gateway Amiga policy. It was a snap answer from a question posed at a non-Amiga related Gateway press conference. It may well be that someone, somewhere at Gateway 2000 knows exactly why they bought it, but wants to see through some plans before any announcements are made. In fact this is the most likely situation. Even a company with a $5 billion turnover doesn't throw money around

> **"the Amiga acquisition was like buying a box marked 'Stuff', on the basis something in there would be of use."**

on a whim. However, a comment such as that is bound to give the impression that they were simply browsing and thought they'd pick it up on the off chance, in the way a discounted product in a shop window could trigger an impulse buy.

Whatever happens, at least for the near future this development has given the Amiga scene a shot in the arm. Even though we may not be much closer to knowing the Amiga's fate, at least we can now see a path out of the frustrating void in which the Amiga has sat, motionless for the last few years.

On a different note, it was with regret that we heard of the closure of Amiga User International, the UK's first ever Amiga mag, on which I worked for many happy years. Respect to Antony Jacobson all the AUI crew for ploughing their particular furrow of the Amiga press. I'm sure you'll join me in wishing them all the best for the future. ■

■ Tony Horgan is CU Amiga Magazine's Editor.

The real jewel in the Amiga's crown



by Mat Bettinson

I'll come out and say it, the Amiga is a commercial insanity. If someone was going to code the absolute best application in a genre, they could make it half as good, ten times as expensive and earn a comfortable living on the PC. Instead, Amiga authors decide they could do better and set out to build The UltimateProgram, TUP for short, for your Amiga.

These authors slave away, implementing all of the things Amiga users demand as standard; top quality installer, ARexx interface, RTG friendly, multithreaded asynchronous cybergraphic executive GUI library front end from hell. That's before they get onto what the program actually does! Then there's the trivial task of making their TUP, getting it beta tested, constantly refining it by spending so much time that their work/studies suffer and then hand optimising it in raw assembly until it's faster than its equivalent on a Quad Pentium Pro 233Mhz.

I'm exaggerating of course, to a degree. Bottom line is that while using my outrageously specced-up PC, nothing is half as good as it is on the Amiga. You know this, I know this, every reader of CU Amiga Magazine knows this. Perhaps even Gateway know this.

> **"while using my outrageously specced-up PC, nothing is half as good as it is on the Amiga."**

My belaboured point is that it's these backyard, overworked and under appreciated programmers who make the Amiga what it is today. It's not the Amiga's hardware anymore.

You're all using, shareware and demos of commercial software, older full versions (from coverdisks) and so on. Please consider that not only are these packages worth the (small) asking price but that there is little more you can do to keep the Amiga thriving than paying for software. You already get so much virtually for free on coverdisks, so spare a thought for Jimmy Bob bashing away at TUP. It just might be the real reason the Amiga is what it is. Anyway, hooray for Gateway. ■

■ Mat Bettinson is CU Amiga Magazine's Technical Editor.

Back Issues

Catch up on any issues of CU Amiga you've missed from our back issues department.

April 1996



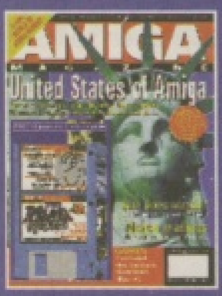
ON THE DISKS: AmiFileSafe, Leading Lap SE – 5 level full game. CD-ROM edition available.
FEATURES: Virus Protection and Wallace & Gromit in the right computer.
INSIDE: SX 32, HiQ Station, The Chaos engine previewed, Zeewolf 2 tips, and more...

May 1996



ON THE DISKS: Soundtracker Pro II, MIDI Sequencer demo, Alien Breed 3D2 demo.
FEATURES: Free Amiga music book, the new Walker, Amiga Surfer pack, and the quest for Amigas.
INSIDE: LightWave 4, Slamtilt Pinball, Tracksuit Manager 2 reviewed.

June 1996



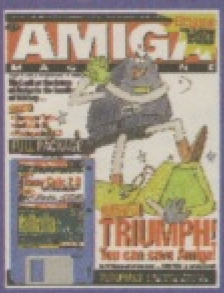
ON THE DISKS: Termite demo, Killing Grounds demo. Plus free 96 page net and comms guide.
FEATURES: Escom sells Amiga Technologies, publish your music.
INSIDE: Modem round-up, Total Football and new TimeKeepers disk reviewed.

July 1996



ON THE DISKS: XiPaint (full program) and Primal Rage demo.
FEATURES: Special report on what's happening in Europe and the latest on Visorp and PIOS.
INSIDE: Image FX 2.6, Surf Squirrel, A4000 Tower, Primal Rage, SWOS Euro and more reviewed.

August 1996



ON THE DISKS: EasyCalc (full program) and Valhalla III demo.
FEATURES: The future of the Amiga with VIScorp, the new PIOS machine and the second part of the Euroscene feature.
INSIDE: Siamese Twin, Photogenics 2.0, Valhalla III and Tin Toy reviewed.

September 1996



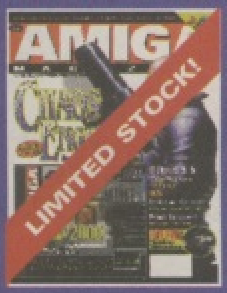
ON THE DISKS: Vista Lite (full program) and a demo of Brian Lara Cricket '96. CD-ROM edition too.
FEATURES: The Aminet exposed. All 6 gigabytes!
INSIDE: Final Writer 5, OctaMED SoundStudio, Atapi CD-ROM drive. Plus an exclusive preview of the new AGA Worms.

October 1996



ON THE DISKS: Upper Disk Tools: ideal for sorting out those awkward disks and drives!
FEATURES: The Amiga in America, Net software...
INSIDE: The speed issue, or something. Three top accelerators, a TCP/IP stack comparison and Capital Punishment.

November 1996



ON THE DISKS: XCAD 2000 - The premier 3D CAD package, plus Chaos Engine 2. Choose CD-ROM or floppy edition.
FEATURES: Palmtop Amiga-Psion link-up.
INSIDE: Opus 5.5, Delfina DSP sound card, Web Browser War, Alfa Quatro, CD-ROM writer and more.

December 1996



ON THE DISKS: Wordworth 3.1 SE, Worms - The Directors Cut demo. CD-ROM or floppy edition.
FEATURES: CD-ROM drive for £50! Amiga and PC games on CD-ROM.
INSIDE: Draw Studio, Apollo 1230, Storm C, Siamese RTG system, Teen Agent, Tiny Troops and more.

January 1997



ON THE DISKS: Imagine 4.0, Underwater Capers, plus over 100Mb of Imagine extras on CD. CD-ROM or floppy edition.
FEATURES: Get a job in computer graphics, plus eight pages of Imagine 4.0.
INSIDE: Art Effect, PPaint 7, SWOS 96-97, Fighting Spirit, Chaos Engine 2 ...

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February 1997



ON THE DISKS: Design Works, Minskies Furballs plus Worms – the Director's Cut extras and Imagine extras on the CD.
FEATURES: The new A/Box and working in computer graphics part II.
INSIDE: Wordworth 6 Office, Turbo Calc, Minskies Furballs, Bograts reviewed.

March 1997



ON THE DISKS: OctaMED SoundStudio (full program) Chaos Engine 2. Plus Chaos Engine 2 AGA demo and lots more on CD.
FEATURES: Turn your Amiga into a pro studio. Printers: problems solved.
INSIDE: Quickcam, Cyber-vision 3D, SMD 100, JetPilot and tons more reviewed.

April 1997



ON THE DISKS: Directory Opus 5.11 (full program). Tiny Troops demo, Loads of stuff on CD.
FEATURES: Build your own Tower Amiga Part 1. The 50 best Amiga Games ever!
INSIDE: Massive Cinema 4D 3.0 Review, new DTP series, ProGrab Sampler, Teletext Decoder, and plenty more.

May 1997



ON THE DISKS: Image Studio (full program) Kargon RPG demo. Exclusive clipart on CD & much more.
FEATURES: The Future's Bright: Gateway Buys Amiga! Tower Amiga Part 2 Internet Killed the Radio Star
INSIDE: PageStream 3.2, Big Red Adventure, LightWave 5, Epson Stylus 600...